

1986

Virginia Commonwealth University Undergraduate Bulletin

Virginia Commonwealth University

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Virginia Commonwealth University

Richmond, Virginia

**1986-87
Undergraduate
Bulletin**

Undergraduate Bulletin 1986–1987

Virginia Commonwealth University
Richmond, Virginia



Volume LX

June 1986

Number 1

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The Board of Visitors, the administration, and the faculty of Virginia Commonwealth University are committed to a policy of equal opportunity in education and employment without regard to race, creed, sex, national origin, age, or handicap. For further information: Office of the Provost, 901 West Franklin Street, Richmond, VA 23284-0001. Telephone number: (804) 257-6162.

Contact Information

Virginia Commonwealth University, 901 West Franklin Street, Richmond, VA 23284-0001
 Medical College of Virginia/Virginia Commonwealth University, 1012 East Marshall Street,
 Richmond, VA 23298-0001
 College of Humanities and Sciences, 900 Park Avenue, Box 2019
 School of Allied Health Professions, 1223 East Marshall Street, Box 233
 School of the Arts, 325 North Harrison Street, Box 2519
 School of Basic Health Sciences, 1101 East Marshall Street, Box 110
 School of Business, 1015 Floyd Avenue, Box 4000
 School of Community and Public Affairs, 919 West Franklin Street, Box 2513
 School of Dentistry, 520 North 12th Street, Box 566
 School of Education, 1015 West Main Street, Box 2020
 School of Graduate Studies, 1101 East Marshall Street, Box 568
 School of Mass Communications, 808 West Franklin Street, Box 2034
 School of Medicine, 1101 East Marshall Street, Box 565
 School of Nursing, 1220 East Broad Street, Box 567
 School of Pharmacy, 410 North 12th Street, Box 581
 School of Social Work, 1001 West Franklin Street, Box 2027
 Admissions/University Enrollment Services, 821 West Franklin Street, Box 2526
 Advising Center, 901 West Franklin Street, Box 2523
 Division of Continuing Studies and Public Service/Evening, Summer, and Off-Campus Studies,
 901 West Franklin Street, Box 2523
 Financial Aid, 327 West Main Street, Box 2506
 Information Desk, 901 West Franklin Street, Box 2527
 Records and Registration/University Enrollment Services, 901 West Franklin Street, Box 2520
 Educational Support Programs, 310 North Shafer Street, Box 2514

ACCREDITATION

Virginia Commonwealth University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools.

EFFECTIVE BULLETIN

The bulletin issued in the academic year a student enters or re-enters a degree program is the one containing the requirements that student must complete to earn his degree.

Students in continuous enrollment may fulfill the requirements of the bulletin issued the year they entered VCU, or switch to a later bulletin. In either case, students must fulfill the requirements listed in the bulletin they choose.

RIGHT RESERVED

All rules and regulations set forth in this bulletin will apply until further notice. The university reserves the right to make changes in courses of study, fees, rules, and regulations *governing the* conduct of the work in all schools and programs, faculty and staff, and classification of students, whenever university authorities deem it expedient or wise to do so.

1986–87 University Calendar

August

Saturday	23	—Official date for certifying August diploma
Monday–Wednesday	18–20	—MCV Campus orientation and registration
Monday–Friday	18–22	—Orientation and advising for all students—Academic Campus
Tuesday	19	—Faculty Meeting at 8:30 am—Academic Campus —Faculty Meeting at 3:30 pm—MCV Campus
Tuesday–Thursday	19–21	—Evening studies registration
Wednesday	20	—Registration for new, transfer, readmit day students—Academic Campus
Thursday–Friday	21–22	—Registration for continuing day students—Academic Campus
Thursday	21	—Classes begin at 8 am—MCV Campus
Thursday–Thursday	21–28	—Add/drop and late registration—MCV Campus
Monday	25	—Classes begin at 8 am—Academic Campus
Monday–Thursday	25–28	—Add/drop and late registration—Academic Campus

September

Monday	1	—Labor Day holiday
Friday	19	—Last day for fall degree candidates to submit graduation applications to their advisors for December degrees
Tuesday	23	—Last day for undergraduate students to submit work for removal of incompletes from spring semester or summer sessions—Academic Campus

October

Thursday	16	—University Convocation at 4 pm—Performing Arts Center
Friday	17	—Last day to drop a course with a mark of “W”—both campuses (except for courses not scheduled for the full semester)
Wednesday–Friday	22–31	—Advising and advance registration for continuing day students for spring semester
Monday–Friday	27–Dec 5	—Advance mail registration—evening studies

November

Wednesday	26	—Thanksgiving holiday begins at 5 pm. No evening classes will meet
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December

Monday	1	—Thanksgiving holiday ends 8 am
Friday	5	—Last day of classes for fall semester—both campuses
Monday–Tuesday	8–16	—Final examinations for fall semester—Academic Campus
Monday–Friday	8–12	—Final examinations for fall semester—MCV Campus
Monday–Saturday	8–13	—Final examinations for fall semester—evening studies
Tuesday	16	—Christmas vacation begins at 5 pm
Friday	26	—Official date for certifying December diploma
Monday	29	—Winter intersession classes begin

January

Wednesday–Thursday	7–8	—Evening studies registration
Tuesday–Thursday	6–8	—Orientation and advising for all day students—Academic Campus
Thursday	8	—Registration for new, transfer, readmit day students—Academic Campus
Thursday	8	—Orientation and registration for new students—MCV Campus
Thursday–Friday	8–9	—Registration for continuing day students—Academic Campus
Saturday	10	—Winter intersession classes end
Monday	12	—Classes begin at 8 am—both campuses
Monday–Thursday	12–15	—Add/drop and late registration for all students
Friday	23	—Last day for spring degree candidates to submit graduation applications to their advisors for May degrees

February

Tuesday	10	—Last day for undergraduate students to submit work for removal of incompletes for fall semester—Academic Campus
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March

Monday	2	—Summer advance registration begins—Academic Campus
Friday	6	—Last day to drop a course with a mark of “W” both campuses (except for courses not scheduled for the full semester)
Saturday	7	—Spring vacation begins at noon—both campuses
Monday	16	—Spring vacation ends at 8 am—both campuses
Thursday–Friday	19–27	—Advising and advance registration for continuing students for fall semester

April

Tuesday	28	—Last day of classes for spring semester—Academic Campus—evening classes continue through May 2
Wednesday	29	—Study day—Academic Campus day classes
Thursday–Friday	30–May 8	—Final examinations for spring semester—Academic Campus

May		
Friday	1	—Last day of classes for spring semester—MCV Campus
Monday–Friday	4–8	—Final examinations for spring semester—MCV Campus
Monday–Saturday	4–9	—Final examinations for spring semester—Evening Studies
Saturday	16	—Commencement (including August and December graduates)
Monday–Friday	18–June 5	—3 week summer pre-session
Monday–Thursday	18–June 18	—5 week summer pre-session
Monday	25	—Memorial Day holiday
Tuesday–Friday	26–June 12	—3 week summer pre-session
Tuesday/Wednesday–	26/27–	
Wednesday/Thursday	July 15/16	—8 week evening session
June		
Monday–Wednesday	15–July 15	—4½ week summer session
Monday–Thursday	15–July 23	—6 week summer session
Monday–Friday	15–August 14	—9 week summer session
Monday/Tuesday–	15/16–	
Wednesday/Thursday	August 5/6	—8 week evening session
Monday–Thursday	22–July 23	—5 week summer session
Monday/Tuesday–	22/23–	
Wednesday/Thursday	August 12/13	—8 week evening session
July		
Thursday	2	—Last day for summer degree candidates to submit graduation applications to their advisors for August degrees
Thursday–Friday	16–August 14	—4½ week summer session
Monday–Friday	27–August 14	—3 week post session
August		
Friday	14	—Summer session ends

**Dear Student:**

VCU offers credit and non-credit programs at differing times and places to full- and part-time students including practicing professionals. We are very proud of the diversity of our programs, many of which have national and international reputations for excellence.

VCU is a vibrant university which has developed rapidly during its 18-year history. It has combined its strong undergraduate and graduate programs with research and public service to provide an exciting environment for learning.

VCU has a capable and committed faculty ready to assist you. Additionally, a comprehensive network of student advising and services is available to you as you begin to formulate your educational goals. You should avail yourselves of these support services.

You are embarking on a very important phase of your life, and VCU is very proud to be a part of it.

Edmund F. Ackell, D.M.D., M.D.
President

PART I—Virginia Commonwealth University

THE UNIVERSITY COMMUNITY

Virginia Commonwealth University is a state supported institution with an enrollment of approximately 20,000 undergraduate, graduate, and health professions students studying on its two campuses in Richmond, Virginia. The Medical College of Virginia Campus is located near the financial, governmental, and shopping areas of downtown Richmond; the Academic Campus is two miles west in Richmond's historic Fan District, a residential area which dates from the nineteenth century.

The university takes its founding date of 1838 from the year in which the Medical College of Virginia was created as the medical department of Hampden-Sydney College. MCV became an independent institution in 1854 and state-affiliated in 1860.

VCU's Academic Campus began in 1917 as the Richmond School of Social Work and Public Health. In 1925, it became the Richmond Division of the College of William and Mary, and in 1939, its name was changed to Richmond Professional Institute of the College of William and Mary, from which it separated in 1962 to become an independent state institution.

In 1968, the two schools merged to form Virginia Commonwealth University: the undergraduate, graduate, and professional programs of Richmond Professional Institute joined with one of the largest and most comprehensive medical centers on the East Coast to create a major state university.

VCU boasts a diverse student body and one of the largest evening colleges in the United States. The university's level of funded research places it among the top 70 colleges and universities in the country in attracting federally funded research grants, and its faculty, representing the finest American and foreign graduate institutions, enhance VCU's position among the important institutions of higher learning in the United States via their work in the classroom, the laboratories, the hospital, and as published in scholarly journals. VCU maintains active communications with its growing cadre of alumni, and enjoys a cooperative and stimulating relationship with the city of Richmond which encompasses the arts, the business community, the architectural community, and local government. Today VCU operates a major teaching hospital and is composed of a college, 12 schools, and the School of Graduate Studies. These academic units offer one associate, 55 baccalaureate, 57 masters, 19 doctoral, two first-professional, and six post-baccalaureate certificate programs.

VCU's location in historic Richmond affords its students the benefit of living in one of the South's most cosmopolitan cities. Located in central Virginia, Richmond is a two-hour drive from the Atlantic seashore to the east, Appalachian mountain recreational sites to the west, and Washington, D.C., to the north. A wide range of cultural, educational, and recreational facilities and activities is available in the Richmond area, including a full performance

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schedule at VCU's own Performing Arts Center. VCU's proximity to downtown Richmond, which is Virginia's capital and a major East Coast financial and manufacturing center, provides students with opportunities for part-time employment and student housing in a variety of settings.

ACADEMIC COMPOSITION OF THE UNIVERSITY

VCU is composed of the following college and schools:

- College of Humanities and Sciences including the School of Mass Communications
- School of Allied Health Professions
- School of the Arts
- School of Basic Health Sciences
- School of Business
- School of Community and Public Affairs
- School of Dentistry
- School of Education
- School of Graduate Studies
- School of Medicine
- School of Nursing
- School of Pharmacy
- School of Social Work

MISSION OF THE UNIVERSITY

Virginia Commonwealth University is a comprehensive, urban, public university whose mission is to provide a fertile and stimulating environment for teaching, learning, research, and service, to promote the pursuit of knowledge; and to disseminate professional skills. Characteristic of comprehensive universities, its thrust is toward the education of citizens who need the solid values and proven strengths of the past as well as knowledge of future alternatives in dealing with society's increasingly urban-influenced problems, wherever these problems may exist.

The university's mission includes the provision of:

A scholarly climate which will inspire in the student a lifelong commitment to learning and service; which will develop in the student competence and motivation to work toward the realization of individual and community potentials; and which will set for the student an example of excellence.

An environment of educational excellence which values diversity and enables faculty to pursue their work in accordance with the highest standards and to serve as exemplary role models.

Educational services for the adjacent urban

community through flexible scheduling and for adults and professionals in adjacent regions through continuing education programs.

Educational experiences away from the metropolis for selected programs so that graduates are prepared to serve the commonwealth in diverse locales.

Research and educational activities in all disciplines to develop and communicate new knowledge, to improve the quality of life, and to promote the best use and general understanding of human and environmental resources.

The recognition of the imaginative power of the arts and humanities in reflecting the problems and aspirations of society; and the providing of opportunities to emphasize the value of the arts and humanities for oneself and for society through public exhibitions and performances.

Comprehensive health care services which meet patient and community needs and which provide an optimal environment both for education and training of health care professionals and for innovative studies on improving health care delivery.

The establishment of the university as a planning and resource center which, drawing upon the unique resources of a major urban area, is devoted to the solution of problems confronting Virginia's communities; to the identification of emerging social needs; and to the planning required for orderly future growth and development.

ACADEMIC RESOURCES

University Library Services: University Library Services supports the teaching, study, and research activities of Virginia Commonwealth University. ULS includes the James Branch Cabell Library on the Academic Campus, the Tompkins-McCaw Library on the MCV Campus, several learning resource centers, including one in each library, and Media Services, which offers audiovisual, television, and other media services on both campuses.

ULS provides information and reference assistance; on-line bibliographic search services; interlibrary loans, class reserves; orientation tours; bibliographic instruction; and photocopy facilities. Cabell Library offers services for the handicapped.

The Learning Resource Centers house a wide variety of print and non-print curriculum support materials in many different subject areas. ULS collections include over 900,000 volumes in all

formats, and over 8,600 periodical titles.

Academic Computing: Academic Computing provides computing support for the research and instructional endeavors of its faculty, students, and staff. Its services include consulting help in the use of university resources, teaching short courses, advice on the acquisition of computer systems, and operation of local computer facilities. A variety of other services are provided to support micro, mini, and mainframe computing.

On the MCV Campus a VAX (VMS) facility provides interactive computing to public and private terminals around the campus. An IDX-3000 Network Switch provides access to the centralized, as well as departmentally owned, computing resources.

On the Academic Campus a local area network of Pyramid (Unix) computers provides interactive computing at several public terminal clusters throughout the campus.

University Computer Center: The Computer Center provides computer utility services on an IBM mainframe (MVS) computing facility for academic and administrative functions of the university. These services include TSO, WYLBUR, and CICS on-line systems and batch job processing.

Institute of Statistics: The Institute of Statistics serves as a clearinghouse for cooperative planning of statistics courses and degree programs, provides assistance to faculty and student research, offers consultative service to business and industry, and participates in other university and community projects.

Center for Educational Development and Faculty Resources (CEDR): CEDR has as its mission the strengthening of university resources devoted to education. This mission is pursued through work in the areas of instructional development, faculty development, and student development. In each area, extramural funding is sought to augment basic university capabilities.

Currently, examples in the area of instructional development include a project to strengthen cancer education in nursing, medicine, and dentistry (funded by the National Cancer Institute), early planning of a project in response to recent criticisms of higher education, and provision of evaluation services to the Cooperative Graduate Engineering Program.

In the area of faculty development, operation of the Faculty Resource Office is the major

activity. This office provides information to faculty on career development opportunities, including the National Faculty Exchange; on extramural funding sources for scholarly projects; and offers consultation on teaching issues. Faculty workshops are offered from time to time.

Student development activities include the provision of academic skills development services on the MCV Campus and the nurturing of minority student's (from both campuses) interest in careers in the health professions.

Most CEDR projects are carried out in collaboration with faculty from the several schools both informally and through formal appointment as CEDR Faculty Fellows (short term) or joint appointments. Close working relationships are maintained with Sponsored Programs Administration and the University Advancement program.

Educational Centers: The VCU Reading/Child Study Center, located on the Academic Campus, and the VCU Adult Learning Center, located on the MCV Campus, provide individualized programs of remedial and enrichment instruction for students who are admitted as special students and for regularly admitted students who experience academic difficulty. The Reading/Child Study Center also provides services to the university learning disabled student as well as to other students who are experiencing learning difficulties. The Adult Learning Center offers English as a second language class to foreign students who might need assistance with the English language as well as basic education classes.

In addition the schools and departments have established their own centers, institutes, and other academic facilities and programs to enhance study and research within their own disciplines.

ACADEMIC SERVICES

VCU seeks to make its courses and programs available to all persons who qualify for college-level work and who wish to enroll. The university has developed programs to improve access to its academic offerings and to prepare special populations for successful college enrollment.

Academic Counseling/Athletic Department: The Academic Counseling Office of VCU's Athletic Department was established to assist student athletes in their efforts toward educational attainment and graduation. The of-

Office seeks to help students maximize academic potential while members of intercollegiate athletic teams. Over 200 men and women participate in the university's 14 intercollegiate athletic programs. The Academic Counseling Office conducts orientation programs for new and transfer student athletes each fall. The office also provides tutorial assistance, academic counseling, and academic progress reviews for student athletes in cooperation with University Enrollment Services. The Academic Counseling Office works to support academic progress of student athletes toward graduation as well as eligibility for participation in intercollegiate athletics.

Division of Continuing Studies and Public Service: The division has major responsibility for the development, coordination, and conduct of the university's continuing and adult education activities, including evening, summer, and off-campus study, non-credit public service classes, non-traditional study, special student advising, Cooperative Education, mediated instruction, and international programs. Thousands of central Virginia residents, who cannot attend college full-time or during the day, take advantage of these programs. (Please see Part XIX of this bulletin.)

Senior Citizen Higher Education Program: The act creating this program provides that any legal resident of the state (over the age of 60) who has been a Virginia resident for one year may enroll in courses at Virginia colleges and universities without paying tuition. (Please see Part II of this bulletin.)

Advanced Scholars Program: Qualified high school seniors from area high schools may be permitted to carry college-level courses at the university concurrently while completing the high school diploma. Students are permitted to select those courses of interest and upon successful completion, receive appropriate college credit. (Please see Part II of this bulletin.)

Early Admission Program: This program allows an exceptional student the opportunity to enroll at the university after the completion of the junior year of high school. (Please see Part II of this bulletin.)

Advanced Placement: Qualified students who have taken college-level work in secondary schools may receive academic credit and/or advanced placement. (Please see Part II of this bulletin.)

Educational Support Programs: This is an

educational assistance program designed to provide innovative curricula and support services, such as academic advising, personal counseling, and career planning to students who have been chosen based on their potential to succeed at VCU. (Please see Part II of this bulletin.)

INTERCOLLEGIATE ATHLETICS

LEWIS B. MILLS

Athletic Director

All undergraduate students registered at VCU are eligible to compete in these sports subject to rules and regulations governing intercollegiate competition. Freshman and varsity athletes are not excused from required physical education and cannot meet their department requirements by being members of a varsity team. Varsity athletes who are members of a physical education class involving the same activity as the varsity sport are excused from the class during that portion of the unit.

Intercollegiate teams for women include basketball, cross country, field hockey, softball, swimming and volleyball; men's sports are baseball, basketball, cross country, golf, soccer, swimming, and tennis. Students interested in a specific sport should contact the coach through the Department of Athletics, located at the Franklin Street Gymnasium, 817 West Franklin Street, Box 2003, Richmond, VA 23284-0001, (804) 257-1278.

ACADEMIC ORGANIZATION

Virginia Commonwealth University is organized into a college, schools, and departments offering undergraduate and graduate programs. The dean's office of each school provides the general coordination of the academic departments and programs within the school. Listed below are the schools with their departments and programs.

The College of Humanities and Sciences

School of Mass Communications

Advertising/Public Relations

Broadcast News

Editorial News

Program in Afro-American Studies

Department of Biology

Department of Chemistry

Department of English

Department of Foreign Languages

French

German

Spanish

Comparative Literature
 Department of History and Geography
 Department of Mathematical Sciences
 Applied Mathematics
 Computer Science
 Mathematics
 Operations Research
 Statistics
 Department of Philosophy and Religious Studies
 Department of Physics and Physical Science
 Dual Physics/Engineering Program
 Department of Political Science
 Department of Psychology
 Department of Sociology and Anthropology
 Pre-professional Studies in Health Sciences
 Dental Hygiene
 Dentistry
 Health Care Management
 Medicine
 Medical Record Administration
 Medical Technology
 Nursing
 Nuclear Medicine Technology
 Occupational Therapy
 Pharmacy
 Physical Therapy
 Veterinary Medicine
 Pre-professional Study for Engineering
 Pre-professional Study for Law

School of Allied Health Professions

Department of Gerontology
 Department of Health Administration
 Program of Medical Record Administration
 Department of Medical Technology
 Department of Nurse Anesthesia
 Department of Occupational Therapy
 Program of Patient Counseling
 Department of Physical Therapy
 Department of Radiation Sciences

School of the Arts

Art Foundation Program
 Department of Art Education
 Department of Art History
 Liberal Arts
 Museum Training
 Pre-Conservation
 Studio/Art History
 Department of Communication Arts and Design
 Department of Crafts
 Ceramics
 Fiber/Fabric Design
 Glassworking
 Jewelry/Metalsmithing
 Wood/Furniture Design
 Department of Dance/Choreography
 Department of Fashion
 Fashion Design
 Fashion Merchandising
 Fashion Illustration
 Department of Interior Design
 Department of Music
 Applied Music
 Composition and Theory
 Music Education

Department of Painting and Printmaking
 Painting
 Printmaking
 Department of Photography (No Undergraduate Degree)
 Department of Sculpture
 Department of Theatre
 Theatre/Acting, Directing, Design
 Theatre Education

School of Basic Health Sciences

Department of Anatomy
 Department of Biochemistry and Molecular Biophysics
 Department of Biostatistics
 Program of Biomedical Engineering
 Department of Human Genetics
 Department of Microbiology & Immunology
 Department of Pharmacology & Toxicology
 Department of Physiology

School of Business

Business Foundation Program
 Department of Accounting
 Department of Business Administration and Management
 Business Administration
 Finance
 Insurance/Financial Security
 Owner/Manager Business
 Personnel and Industrial Relations
 Production/Operations Management
 Real Estate and Urban Land Development
 Department of Economics
 Department of Information Systems
 Department of Marketing
 Department of Office Automation Management
 Office Systems
 Paralegal
 Business Teaching

School of Community and Public Affairs

Department of Administration of Justice and Public Safety
 Corrections
 Juvenile Justice
 Police Planning and Management
 Traffic and Highway Safety
 Department of Recreation, Parks, and Tourism
 Recreation and Park Management
 Recreation and Program Leadership
 Therapeutic Recreation
 Travel and Tourism
 Department of Rehabilitation Counseling
 General Client Services Option
 Alcoholism and Drug Client Services Option
 Department of Urban Studies and Planning
 Environment
 Information Systems
 Planning
 Public Policy and Social Change
 Urban Management

School of Dentistry

Department of Endodontics
 Department of General Dentistry
 Program in Dental Hygiene
 Department of Oral Pathology
 Department of Oral and Maxillofacial Surgery

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Department of Orthodontics
Department of Pediatric Dentistry
Department of Periodontics
Department of Removable Prosthodontics
Department of Restorative Dentistry

School of Education

Division of Educational Services
 Behavior Disorders
 Learning Disabilities
 Mental Retardation
 Severe Profound Handicaps
Division of Educational Studies
 Marketing Education
 Health Occupations Education
Division of Health and Physical Education
 Physical Education
 Health Education
Division of Teacher Education
 Early Childhood Education NK-4
 Elementary Education 4-8
 Secondary Education:
 Biology
 Chemistry
 English
 French
 General Science
 German
 History/Social Science
 Mathematics
 Physics
 Spanish

School of Medicine

Department of Anesthesiology

Department of Dermatology
Department of Family Practice
Department of Internal Medicine
Department of Legal Medicine
Department of Neurology
Department of Obstetrics and Gynecology
Department of Ophthalmology
Department of Otolaryngology
Department of Pathology
Department of Pediatrics
Department of Preventive Medicine
Department of Psychiatry
Department of Radiology
Department of Rehabilitation Medicine
Department of Surgery

School of Nursing

Department of Community and Psychiatric Nursing
Department of Maternal Child Nursing
Department of Medical/Surgical Nursing

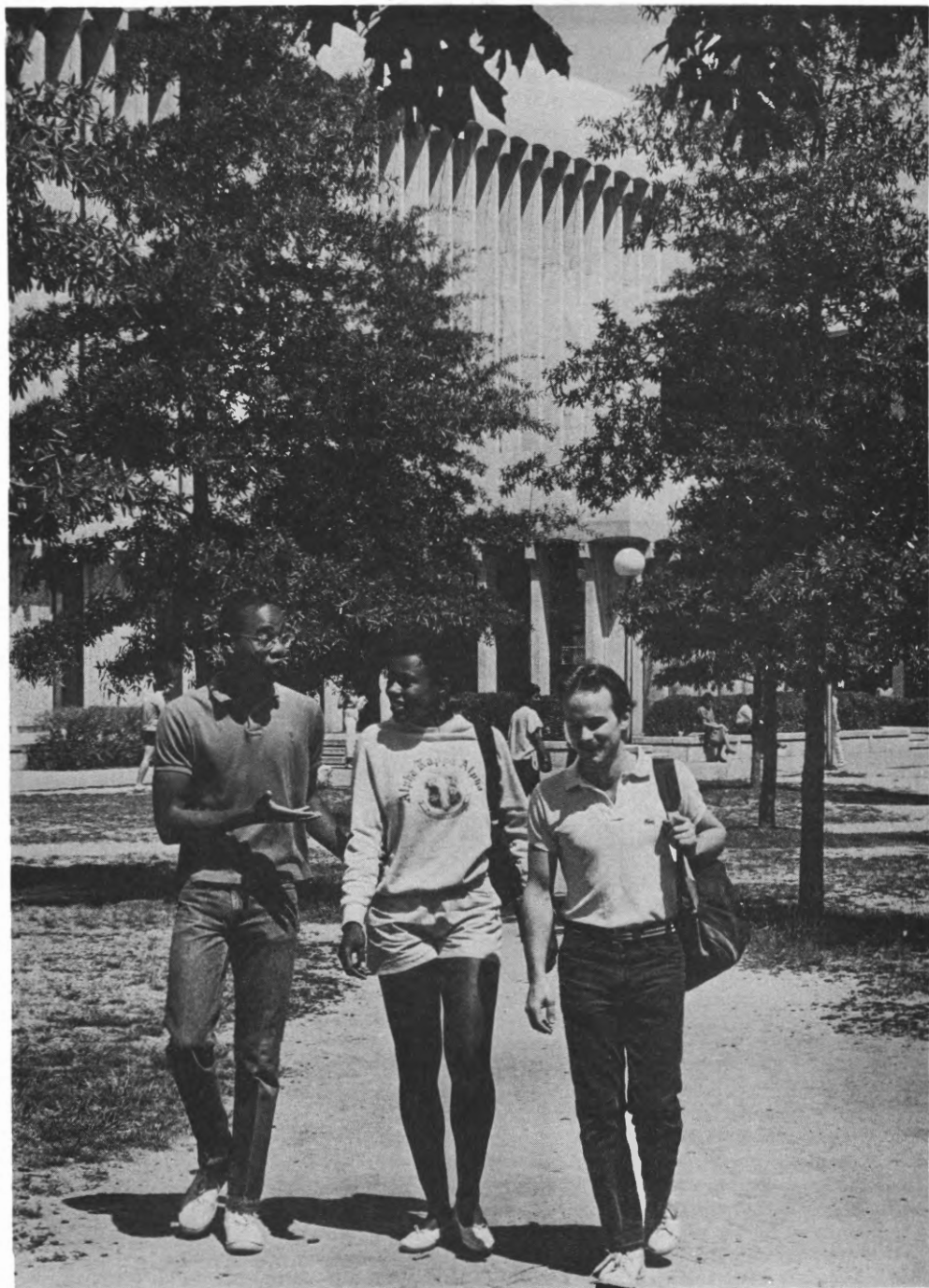
School of Pharmacy

Department of Medicinal Chemistry
Department of Pharmacy and Pharmaceutics

School of Social Work

Baccalaureate Social Work Program
Master of Social Work Program
Ph.D. Program in Social Policy and Social Work

For a complete list of Academic degree programs, please see Academic Programs in this bulletin.



VCU, an urban, public university in the heart of historic Virginia, enrolls more than 19,000 students.

PART II — Undergraduate Admission

University Enrollment Services staff is available to answer general questions, to distribute publications and application forms, and to provide specific information pertaining to the admissions process.

Application forms and other admissions information may be obtained by writing or telephoning University Enrollment Services/Admissions, Virginia Commonwealth University, Box 2526, 901 West Franklin Street, Richmond, VA 23284-0001, (804) 257-1222, or by visiting the office at 821 West Franklin Street.

GENERAL POLICY GOVERNING ADMISSIONS AND ENROLLMENT

As a comprehensive, metropolitan, public institution, Virginia Commonwealth University seeks to provide excellent higher education for those who will profit from an intellectually challenging experience. The university encourages applications from qualified individuals who are sincere in their desire to study in an environment where excellence in teaching, research, scholarly activities, and community services are stressed. Recognizing the value of a diverse student body, the university invites applications from all qualified persons without regard to age, race, sex, religion, handicap status, or national origin. Although the university has a primary responsibility to educate Virginia residents, the value and contribution of a diverse student body is recognized and the enrollment of students from other states and countries is encouraged. Entrance requirements are in full compliance

with all applicable federal and state statutes, rules, and regulations.

All persons admitted and enrolled at the university are classified as either degree-seeking or special students (nondegree-seeking). Degree-seeking students are presumed to be working toward a degree in approved educational programs, while special students are permitted to enroll in classes on a semester/term basis. Recognizing a commitment to educate students who desire to take courses primarily for self improvement or to continue life-long education, the university encourages enrollment of special students. The university will enroll as many qualified degree and non-degree students as resources permit. When resources are limited, spaces will go to those who present credentials showing the greatest potential for academic success in degree programs and for contributing to the university's diverse programs and mission.

The Board of Visitors establishes general admission policies on the recommendation of the university administration. Specific admissions criteria and policies are recommended by the deans of the schools and college of the university upon advice of their faculties. Entrance requirements for schools and the college within the university may differ. Unique requirements such as auditions, portfolios, interviews, licensure, or language proficiency may be required to demonstrate potential for success in selected programs and courses. It is the responsibility of the director of University Enrollment Services to validate

credentials submitted for enrollment in the university. The deans of the various schools and the college, or their designees, are responsible for evaluating credentials presented by applicants and for recommending admission. The university will select applicants who present the strongest qualifications in scholastic achievement and potential, standardized examinations, and through review of other evidence of potential.

The Vice-Provost for the Division of Continuing Studies and Public Service, with the assistance of the director of University Enrollment Services, will pass on the credentials of all undergraduate students seeking enrollment in the special student status. The dean of the School of Graduate Studies, or designee, and the director of University Enrollment Services will pass on the credentials of all graduate students in the special student status.

CATEGORIES OF STUDENT ENROLLMENT

VCU provides a variety of ways in which a student may pursue a course of studies.

Degree-Seeking Student. This student has fulfilled the admission requirements of a particular school and is enrolled in a bachelor's (four-year) degree program or a health sciences preparatory program. A degree-seeking student may engage in studies as either a full-time (12 credits or more per semester) or as a part-time student, and may enroll for day and/or evening classes.

Furthermore, a degree-seeking student may pursue a program of studies in one of the following ways:

1. As a **declared departmental major** in a school or college. The student who declares a specific major upon entry to VCU will begin a course of studies leading to a degree in the declared major. (The student may change the major at a later date.)
2. As an **undecided student** with a specific school or college. Students who know the school or college of the university they wish to enter, but not the specific department, may select the "undecided" category within that particular school or college. Students will be advised along general academic lines so they may enroll in courses which will assist them to more clearly define their academic objectives.

Recognizing that some undecided students seeking admission to VCU may not wish to choose a particular school in which to study by the time they apply or enroll, the university recommends that they select the undecided category in the College of Humanities and Sciences. The advising program is flexible enough to suit the interests of any student, yet it is basic to a number of fields of study. During the first year of study students are encouraged to investigate various fields of study until they find a major which suits their interests and needs.

Students must define these goals and declare a major area of study no later than the semester in which they will complete their 62nd credit (two years of study).

Undergraduate Special Student. A student, who meets the requirements for undergraduate eligibility, may enroll for credit as a special student in day and/or evening classes at VCU without seeking admission to a degree program.

Undergraduate special students are advised about course selections and aided in educational and vocational planning by the counselors in the University Advising Center. Students may obtain an unofficial evaluation of credits earned at another institution by contacting the University Advising Center. Permission to enroll as a special student does not assure later admission as a degree-seeking student. Continuance in this status is dependent on academic performance, and special students are subject to the continuation regulations stated in Part V of this bulletin.

The undergraduate special student may pursue course work in one of the following categories:

1. As a **nondegree holder**. This student has not previously earned a baccalaureate degree. The student may take a maximum of 11 credits per semester (part-time).
2. As a **degree holder**. This student has previously earned a baccalaureate degree at VCU or another accredited institution and plans to pursue additional undergraduate course work. The student may take a maximum of 19 credits per semester.
3. As a **transient student**. This is a student who is presently seeking a baccalaureate degree at another institution of higher education and is in good standing at that institution, and plans to pursue a course of

study at VCU for no more than two semesters with the intent of transferring the work back to the home institution to complete the degree. The student may take a maximum of 19 credits per semester.

Credits earned as a special student will be recorded on the student's permanent academic record. There is no limit placed upon the number of credits that can be earned in this classification. However, special students who wish eventually to earn a baccalaureate degree at VCU are encouraged to seek admission to a degree program before accumulating 22 semester credits.

EVENING AND SUMMER STUDIES ATTENDANCE

VCU day and evening programs are academically integrated, and credit earned in the evening program is identical to credit earned during the day. An evening program student is one who takes only evening program courses designated by the letter "E." (For classification purposes, any student who takes at least one course during the day is classified as a "day student".) A student may register for courses in the evening program as a degree-seeking or a special (nondegree-seeking) student.

Evening and summer program information may be requested by mail, telephone, or by stopping by the Evening and Summer Studies Office, Virginia Commonwealth University, Box 2523, 901 West Franklin Street, Richmond, VA 23284-0001, (804) 257-0200. Refer to Part XIX for additional evening and summer program information.

ADMISSIONS GUIDELINES

The credentials of undergraduate applicants for admission to degree status are reviewed on an individual basis. Because the number of applicants who meet the requirements for admission exceeds the number that can be admitted, the university selects those candidates who present the strongest qualifications in scholastic achievement and potential as reflected on transcripts and test scores. Applicants interested in enrolling as special students should read the Special Student Guidelines which appear in this section.

Freshman Admission Guidelines

An applicant for degree status must be a graduate of an accredited secondary school or its equivalent, or hold a GED certificate with ade-

quate scores. A high school student should submit an application for admission after completion of the junior year, unless applying for the Early Admission or Advanced Scholar programs.

All freshman applicants under the age of 22 are required to submit scores from the Scholastic Aptitude Test (SAT) or American College Test (ACT).

For admission to the College of Humanities and Sciences (including the School of Mass Communications), School of Business, School of Community and Public Affairs, School of Education, or School of Social Work, the following minimum distribution of subjects is required: four units in English; two units in mathematics, one of which must be algebra; two units in science, one of which must be a laboratory science; and two units in history or social sciences or government. Applicants seeking admission to programs in mathematics, business, secondary education, science, the preprofessional health-related programs, or pre-engineering should acquire additional units in college preparatory mathematics and laboratory sciences.

The School of the Arts does not have high school unit requirements. In place of the units, degree applicants must complete an Art Admission Packet which is designed to measure the applicant's ability and aptitude for the arts. The packet forms an important part of the basis on which an admission evaluation will be judged. With the exception of fashion merchandising and some concentrations in art history, applicants to the visual arts (including technical/design theatre) are required to complete the drawing and design exercises specified in the packet. Additional art work should not be submitted unless requested. Applicants to the Departments of Dance/Choreography, Music, or Theatre must complete the written information in the packet and are required to participate in an audition arranged by the appropriate department. Applicants to the Department of Music must also show evidence of *attaining proficiency* in one or more areas of music performance and must take the musicianship placement examination.

Freshman applicants planning to pursue a major in the health sciences (dental hygiene, medical record administration, medical technology, nursing, occupational therapy, pharmacy, physical therapy) are advised to apply to

the preprofessional programs of their choice in the College of Humanities and Sciences.

Health care management majors may pursue studies in either the College of Humanities and Sciences or the School of Business. The University Honors Program offers qualified students interested in health science the opportunity for early acceptance into many of VCU's Medical College of Virginia Campus programs.

Freshman applicants who are not admitted with degree status may be eligible to enroll at VCU as special students provided one year has elapsed since their high school graduation date.

Transfer Admission Guidelines

Transfer applicants are considered for admission provided they present evidence of good standing at the last institution attended. A cumulative "C" average minimum (2.0 on a 4-point scale) in all credits attempted at all accredited colleges attended is expected for admission. Transfer candidates who have earned fewer than 30 semester credits/45 quarter credits and who are under 22 years of age must submit the SAT or ACT results, and must also meet specific guidelines listed on the Freshman Admission Guidelines sections.

Some programs have additional requirements for admission as a transfer student. For example, transfer applicants to the Schools of Art, Business, Mass Communications, and the health science programs on the Medical College of Virginia Campus should consult the appropriate section of this bulletin for admission requirements.

Each Virginia community college has been supplied with the *VCU Transfer Guide for Virginia Community Colleges* which provides transfer information for specific schools, departments, and programs at VCU. Students planning to transfer should read this guide carefully and should also consult with their community college counselors regarding the specific information in the transfer guide.

Transfer applicants who are ineligible to return to their former institutions must wait until they are eligible to return or stay out a period of one year for the first suspension and five years for the second before they will be considered for admission to VCU.

Transfer applicants who have been suspended from another institution for nonacademic or disciplinary reasons will be referred to the Office of

the Vice-President for Student Affairs for pre-admission clearance.

Readmission Guidelines

Students who withdraw from all courses after the first week of the semester are considered to have been enrolled for that semester. Students who have not attended VCU for four or more successive semesters (including summer) must submit an application for readmission to University Enrollment Services/Admissions. Students who have attended another institution or who have been suspended since their last enrollment at VCU must also apply for readmission. This must be done prior to the application submission date for the semester in which the student plans to return.

Students who wish to return to VCU after matriculation at another institution will be considered transfer applicants and will be reviewed for admission based on the transfer admission guidelines related to good standing and cumulative grade point average.

Readmission applicants who wish to change their major may be required to meet additional requirements for some programs. Applicants to the School of the Arts must submit the Art Admission Packet.

Students may apply for readmission to VCU for the semester following completion of the first suspension period (two semesters, one of which may be summer). Under certain circumstances, students may be considered for readmission from the second and final suspension after a period of five years. For more information on suspension policies, refer to Section V of this bulletin.

Applicants who have been suspended from the university for nonacademic or disciplinary reasons will be referred to the Office of the Vice-Provost for Student Affairs for pre-admission clearance.

Foreign Student Admission Guidelines

Complete information and application materials for undergraduate foreign students may be obtained on written request from University Enrollment Services/Admissions. Because of the additional time required for processing foreign applications, applicants should apply well in advance of the foreign student application deadline which is April 1 for the fall semester and October 1 for the spring semester. Applications remaining incomplete six weeks prior to the date

of registration are subject to cancellation. No foreign students will be allowed to register for classes until approved for registration by the U.S. Immigration and Naturalization Service.

The university requires foreign students to demonstrate a level of competency in the English language that is sufficient to meet admission requirements. Foreign students are required to take the Test of English as a Foreign Language (TOEFL) and to achieve a minimum total score of 550.

As the university provides no financial support for foreign students, applicants requiring a Foreign (F-1) or Exchange (J-1) visa must also present documented evidence of available financial support to cover educational and living expenses at VCU.

Students who are permanent residents of the United States are generally considered under the same admission procedures and guidelines as those applied to U.S. citizens. However, the university does require detailed information concerning the applicant's immigration status. A form for this purpose will be provided to all permanent resident applicants upon receipt of an application for admission. Additionally, proficiency in the English language will be dependent upon many factors such as length of stay in this country, amount of formal U.S. education, and the verbal score on the Scholastic Aptitude Test. The university reserves the right to require additional testing in cases where such information is deemed necessary.

Because of U.S. Immigration and Naturalization Service guidelines, foreign students are not usually allowed to study at VCU as special (nondegree-seeking) students.

Permanent residents and other students who do not effectively communicate in the English language and who wish to attend VCU as special (nondegree-seeking) students are advised to begin study on an audit basis and enroll in English 002 (English as a Second Language) unless they have scored 550 on the Test of English as a Foreign Language or have already successfully passed college-level English course work in the United States.

Special Student Guidelines

The first time a student registers as a special student, he/she must meet the following conditions of eligibility:

1. Be a high school graduate or GED holder for one year prior to the intended term of entry; or
2. Be an applicant who meets established admission requirements; or
3. Be a transfer student who is eligible to return to the former institution or has been out of school for at least one year for a first suspension or five years for the second suspension; or
4. Be a former VCU student who is eligible to return. If the student has been suspended from VCU for academic reasons, eligibility for future enrollment must be reestablished in accordance with procedures outlined in the preceding readmission guideline section and the suspension policies outlined in Part V of this bulletin; or
5. Be a bachelor's degree holder taking undergraduate courses; or
6. Be an eligible transient student. A transient student must present, prior to or at the time of registration, a letter from the home institution which states that the student is in good standing, has permission to study at VCU for transfer back to the home institution, and outlines the courses to be studied at VCU.

Students are responsible for knowing the terms of eligibility and for stating that they are special student eligible.

The first time a student registers as a special student, proof of eligibility will be required. Students may sign an eligibility card stating their eligibility which will then be verified by University Enrollment Services/Records and Registration. A student may also establish eligibility by providing verification of high school graduation, GED certification, or verification that he/she is eligible to return to the previous institution of study.

If the student's eligibility cannot be verified or if the student is found to be ineligible, the grade on the course taken will be changed to NC (no credit), there will be no tuition refund, and an administrative hold will be placed on future registrations until eligibility is established.

Degree holding special students enrolling in graduate courses should refer to the *VCU Graduate Bulletin*.

Special students who plan to earn a degree eventually must apply for degree admission and may, depending on their credentials, be required to complete 15 credits with an earned grade-point average of 2.0 which includes a minimum of two courses (totaling six credits) required by their degree curriculum.

Students studying on foreign student visas, because of U.S. immigration and naturalization regulations, are expected to enroll as full-time students and are usually not permitted to enroll as special students.

SENIOR CITIZENS HIGHER EDUCATION PROGRAM

The Senior Citizens Higher Education Act of 1974 provides that any legal resident of the state who before the beginning of any term or semester . . . in which he or she claims benefits of the act, and who has had legal domicile in the state for one year may, without paying tuition, register for and enroll in courses under the conditions outlined in the act as amended in 1982.

The tuition-free policy shall apply except that the senior citizen shall be subject to fees established for the purpose of paying for course materials, such as laboratory fees, individualized music instruction, etc.

Senior citizens who are not enrolled for academic credit may not register for more than three courses in any one term or semester, but may register each semester. The Senior Citizens Act benefits shall be available to persons 60 years of age or older with the following legally mandated provisos:

1. The senior citizen shall be subject to admission requirements of the institution.
2. The institution shall determine whether or not it has the ability to offer the course or courses.
3. The senior citizen shall be admitted to a course after all tuition-paying students have been accommodated.

Senior citizens wishing to avail themselves of the opportunity to study at Virginia Commonwealth University should call

for day courses: University Enrollment Services/Admissions, (804) 257-1222.

for evening courses: the Evening, Summer and Off-Campus Studies Office, (804) 257-0200.

for non-credit courses: the Evening, Summer and Off-Campus Studies Office, (804) 786-0342.

ADMISSION PROCEDURES

It is the responsibility of the applicant to ensure that all required admission documents are forwarded to University Enrollment Services before the deadline (refer to page 15). Appli-

cations and supporting credentials for programs offered on the Academic Campus must be submitted to University Enrollment Services/Admissions, Virginia Commonwealth University, Box 2526, 901 West Franklin Street, Richmond, VA 23284-0001.

Applicants to the professional-level health science programs offered on the MCV Campus (except for the associate degree program in radiologic technology) must have completed a minimum of 60 semester hours of transferable credit from an accredited college or university and must satisfy the prerequisites of the program to which they are applying. Refer to the appropriate section of this bulletin or the *Medical College of Virginia Bulletin* for specific admission requirements. Applications and supporting credentials for the professional-level health science programs must be submitted to University Enrollment Services/MCV, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

All applications and supporting documents become the property of the university and are not returned to the applicant. After all required documents have been received, candidates will be notified of the decision by University Enrollment Services.

The following must be submitted to University Enrollment Services when applying for an undergraduate degree program:

1. **Official Application Form.** Candidates seeking admission to the university in an undergraduate degree program (or as a readmission candidate) must file an official Application for Undergraduate Admission before the specified deadline. Students planning to complete a second baccalaureate degree must also submit this application. Care should be taken to read the admissions guidelines in this bulletin, to follow the directions accompanying the application, and to complete all information requested. Incomplete or incorrect applications will result in a processing delay.
2. **Application Fee.** Application fees are nonrefundable and should be submitted in check or money order with the application for admission. Do not submit cash. The Academic Campus application fee is \$10; the Medical College of Virginia Campus application fee is \$20. Currently enrolled

VCU students applying to MCV Campus programs are not required to remit the application fee. Applications will not be processed until the fee has been received.

3. **Official transcript(s).** *Freshman applicants* are required to submit their official high school transcript(s) showing work to date. The secondary school record should contain courses and grades earned, rank in class, and overall grade-point average. A final transcript will also be required showing date of graduation, overall grade point average, and rank in graduating class. **Freshman applicants still in high school are encouraged to have their guidance counselors submit the Application for Admission with their transcripts.** GED holders must submit their partial high school transcripts (if high school was attended).

Transfer candidates must request the registrar of all colleges attended to send an official transcript of their grades. Transfer candidates who have earned fewer than 30 semester credits/45 quarter credits must also submit their secondary school record.

University Enrollment Services/Admissions will obtain for *readmission candidates* the student's VCU transcript. Applicants who have attended other colleges since leaving VCU must ask the registrar of each college to send official transcripts to UES/Admissions.

Applicants to professional-level *health science programs* must submit official high school transcripts and official transcripts from all colleges, universities, and hospital schools/programs attended.

4. **Test Scores.** *Freshman applicants* (high school graduates and GED holders) under 22 years of age must submit CEEB/Scholastic Aptitude Test (SAT) or American College Testing Program (ACT) scores.

GED holders must submit an official copy of their GED scores.

Transfer applicants under 22 years of age and with less than 30 semester/45 quarter credits of college work must submit SAT or ACT scores.

Applicants to the *Radiologic Technology Program* must submit SAT or ACT scores. Applicants to professional-level *health science programs* must submit

these scores if they have taken either of these tests; however, applicants are not required to take either test if they have not already done so. Applicants to the Pharmacy Program are required to submit scores for the Pharmacy College Admission Test (PCAT), and applicants to the Radiologic Technology Program are required to submit scores for the Entrance Examination for Schools of Health Related Technologies (EESHRT) in addition to the SAT or ACT scores. PCAT and EESHRT test booklets are supplied in the Health Science Application Packet or may be obtained by writing to the testing agency.

Foreign applicants whose native language is other than English must submit scores for the Test of English as a Foreign Language (TOEFL) in addition to any other test scores required.

5. **Supplemental Application Packets.** *Art applicants* submit the Art Admission Packet to the School of the Arts, Pollak Building, Box 2519, 325 North Harrison Street, Richmond, VA 23284-0001.

Applicants to professional-level *health science programs* submit, in addition to the application for admission, the supplemental application materials for the program to which they are applying. All materials are provided in the Health Science Application Packet for the program to which the applicant is applying. See the *Medical College of Virginia Bulletin*.

Foreign applicants submit the Financial Support Statement with the application for admission in addition to any other supplemental application packets which may be required.

6. **Interviews and Auditions.** Applicants to the following programs will be contacted by the program for an interview or audition: dance/choreography, dental hygiene, medical record administration, music, nontraditional studies, occupational therapy, physical therapy, radiation sciences, radiologic technology, and theatre. Health science program applicants applying to programs not listed are strongly encouraged to contact UES/MCV, (804) 786-0488, to arrange an interview. Although interviews are not required for

other programs, applicants are welcome to meet with an admissions representative to discuss their applications. In some cases, however, University Enrollment Services/Admissions may *require* an interview.

Undergraduate Application Deadlines

While application deadlines for most programs are August 1 for the fall semester and December 1 for the spring semester the following earlier application deadlines are established for the programs indicated:

	<i>Fall Semester</i>	<i>Spring Semester</i>
dental hygiene	January 15	
nursing	January 15	
pharmacy	February 1	
medical technology	March 1	
radiologic technology	March 1	
radiation sciences	March 1	
medical record administration	April 15	
health care management	June 30	November 30
School of Business transfer and readmit applicants	July 1	November 15
occupational therapy	December 15	
physical therapy	December 15	

Foreign applicants must apply by April 1 for fall enrollment and October 1 for spring enrollment. Foreign students applying to health science programs should refer to the program deadline dates above.

Applications received after deadline dates will be considered on a space available basis.

Financial aid applicants (both campuses) must apply by March 1. Applications received after the deadline date will be considered if funds are available.

ADMISSIONS NOTIFICATION

Applicants accepted to the university will be notified by letter of the conditions of their acceptance. Information on advisement and registration procedures, the medical history form, and housing information will be included with the acceptance letter. Virginia requires that all full-time students enrolling for the first time in a Virginia public institution of higher education furnish a health history from a qualified licensed physician. New students must submit their health history to the VCU University Health Service.

When an applicant is tentatively accepted to the university, a final transcript is required to complete the individual's admission file. If the official transcript has not been received by the date specified on the acceptance letter, an ad-

ministrative hold will be placed on future registrations until the credentials are received establishing the student's eligibility.

The university reserves the right to rescind offers of admission if the final documents indicate that the applicant no longer satisfies the entrance requirements.

Undergraduate applicants who are not admitted to degree status but are offered special status may request information or assistance in formulating alternative educational plans from the University Advising Center.

ORIENTATION

The university provides orientation during the summer, fall, and spring to all new undergraduate students. Orientation programs are designed to increase the students' awareness of the university's programs, services, and facilities and to provide opportunities for faculty advising and registration for their first semester of classes.

After acceptance to the university, students will be sent detailed information regarding the orientation program. Included in the orientation program is a program for the parents of freshman students that is especially helpful for their understanding of the university and its future relationship to their sons and daughters.

For additional information about orientation, contact the Orientation Coordinator, Box 2032, 901 West Franklin Street, Virginia Commonwealth University, Richmond, VA 23284-0001.

EVALUATION OF TRANSFER CREDIT

An evaluation of transferable credits is made by the appropriate school or department after the accepted applicant's final transcript has been received by University Enrollment Services/Admissions.

Acceptable course credits from other institutions will be recorded on the student's permanent record at VCU, together with the grades earned, if the credits are applicable toward a degree program. Accepted transfer credits are counted as hours earned toward the degree, but are not used in the computation of the student's VCU grade-point average. Grades for transfer credit are evaluated in the computation determining graduation honors. Credits earned at other institutions carrying a grade of "D" are not accepted for transfer. In addition, transfer work from two-year institutions may not be

applied to upper-division requirements at VCU.

Students accepted from the Virginia Community College System and other two-year institutions who have received the Associate in Arts or Associate in Science degrees in a university parallel college transfer curriculum generally will qualify for junior status. Exact designation of the student's status will be determined after an evaluation of acceptable credits is made by the school or college of the university in which the student enrolls. Up to 50 percent of the total credits required for graduation from the program into which the student is transferring may be transferred from two-year institutions, including not more than 50 percent in the major field of study. However, the candidate should realize that more than two additional years may be necessary to complete the degree requirements in certain curricula.

Credits earned in community college occupational or technical programs will be judged on their own merits to determine their applicability toward VCU degree requirements. In addition many accredited institutions offer correspondence courses which may be considered for transfer credit.

Courses taken on the "pass/fail" or "pass/no pass" systems, or courses taken for grades of "satisfactory" or "unsatisfactory" which receive earned credits and a "satisfactory" grade (or comparable passing grade) from the transfer institution will receive equivalent semester credit. Transfer credits graded as "pass/fail" will not be included in the computation for determination of academic honors at VCU.

The final 30 credits required toward the degree must be completed in residence at Virginia Commonwealth University.

EDUCATIONAL SUPPORT PROGRAMS

Educational Support Programs, a composite of several services, seek to enhance the success and promote the retention of program participants. The programs focus on VCU's non-traditional students (i.e. minority, low-income, and first generation college students) who meet the criteria for participation. Educational Support Programs offer counselor support, academic planning, tutorial assistance, and a variety of seminars and workshops designed to meet the needs of its population.

Educational Support Programs also provide an alternate admission process for students who marginally meet or fall below the university's

requirements for admission as full-time degree-seeking students. Students who are accepted through Educational Support Programs alternative admission have demonstrated potential for academic achievement that is not always indicated by their SAT scores. Students admitted to the programs are required to attend a developmental program during the summer prior to their university enrollment. Students enroll in courses in mathematics, English, reading/study skills, and orientation to the university. This summer experience allows students to ease into the rigorous demands of university life by improving basic academic skills and personal confidence.

During the academic year, program participants maintain close contact with the program and counselors. Students are monitored by their counselors to ease their adjustment to the university.

Educational Support Programs participants are selected from a variety of academic, economic, geographic, and cultural backgrounds. Early application to the university is encouraged, especially for students who will also need financial aid. Priority consideration for admission and also for financial aid will be given to students who apply before March 1.

Students who are interested in participating in the programs should write to the Office of Educational Support Programs, Virginia Commonwealth University, Box 2514, 901 West Franklin Street, Richmond, VA 23284-0001.

PERSONS WITH DISABILITIES

Virginia Commonwealth University is committed to a policy of affirmative action in program accessibility for qualified students without regard to condition of disability. The university seeks to provide reasonable accommodations where required, which may include, but are not necessarily limited to

Program Access

Students with disabilities who require assistance with registration and class assignments may request assistance through the assistant dean of student affairs. Student needs will be examined and individualized remedies will be developed as needed;

Parking

Parking facilities for students with disabilities may be arranged through the University Parking Office. Assignments will be made as needed in

reserve parking lots (usual parking fee will be assessed);

Housing

Dormitory facilities that accommodate to the needs of students with disabilities are available on request through the University Housing Office;

Grievances

Students with concerns about inadequate or inappropriate provision of services to accommodate their condition of disability may receive assistance from the assistant dean of student affairs. Problems not resolved may be referred by the assistant dean of student affairs or the involved student to the University Equal Employment Opportunity Officer.

ENRICHMENT AND ACCELERATION OPPORTUNITIES

Special honors programs and courses are offered at the university. Please refer to the appropriate school sections of this bulletin for further information. Interdisciplinary honors courses designed for superior freshmen in any program are also available.

Early Admission Program

The Early Admission Program permits exceptional students the opportunity to enroll at the university as freshmen after the completion of the junior year of high school. The program is available to students who demonstrate readiness for college by their high school record, SAT results, and in an interview with an admissions officer. Additionally, early admission applicants must be within two of the required units for graduation and have the written approval of the high school principal to seek admission to college as full-time undergraduate students. Candidates interested in this program should write University Enrollment Services/Admissions for further information.

Advanced Scholars Program

Qualified high school students from Richmond and surrounding area high schools may be permitted to carry college-level courses at the university concurrently while completing the high school diploma. Students may select courses of interest and upon successful completion of the courses may receive college credit. However, courses selected should not be avail-

able in the high school curriculum.

Candidates must be nominated and approved by the secondary school principal. A maximum of 100 candidates will be accepted for each term and candidates enroll for no more than three courses per term.

As a guide to secondary schools, the following criteria for selection are considered:

1. Each candidate must be nominated and approved by the secondary school principal.
2. Each candidate must have achieved a total of 1,000 points on the College Entrance Examination Board SAT (100 PSAT) and must have maintained a "B" average.
3. The desired courses to be studied must be available and appropriate.

Notification forms and other information may be obtained from University Enrollment Services/Admissions, Box 2526, 901 West Franklin Street, Richmond, VA 23284-0001, (804) 257-1222.

Advanced Placement Tests/College Board

Qualified students who have taken college-level work in a secondary school may receive academic credit and/or advanced placement. Examinations which determine advanced placement are the Advanced Placement Tests of the College Board. AP grades of 3, 4, or 5 will be given from three to ten semester credits per AP test depending on the subject area and the quality of the free response section of the particular AP test. Final determination of credit will be made after test results and examination booklets have been received by the dean's office in the College of Humanities and Sciences and have been evaluated by the university. Accepted credits are counted as credits earned toward the degree, but are not used in the computation of the student's VCU grade-point average.

The university accepts advanced placement in the following areas: American history, history of art, biology, chemistry, computer science, English language and composition, European history, French language and literature, German language and literature, Latin, mathematics calculus AB, mathematics calculus BC, music listening and literature, music theory, physics B, physics C, and Spanish language and literature.

College-Level Examination Program

The College-Level Examination Program (CLEP) is designed to allow individuals who

have gained knowledge outside the classroom to take an examination and receive college credit for what they have learned.

New students interested in taking the CLEP examination should direct their inquiries to the Office of Student Services, School of Education, Virginia Commonwealth University, Box 2020, 901 West Franklin Street, Richmond, VA 23284-0001, (804) 257-1296.

CLEP credit is awarded officially only to students who are accepted in a degree program. The maximum credit that can be earned through CLEP is 54 semester hours. If a student has earned CLEP credit in a specific subject area or the mathematics general examination, that credit cannot duplicate accepted transfer credit or credit earned in courses taken at VCU. VCU does not award CLEP credit for the English general examination.

Official CLEP scores must be sent to University Enrollment Services/Admissions for evaluation of credits from another institution.

Information for current students is found in Part V of this bulletin.

Undergraduate Credit by Examination

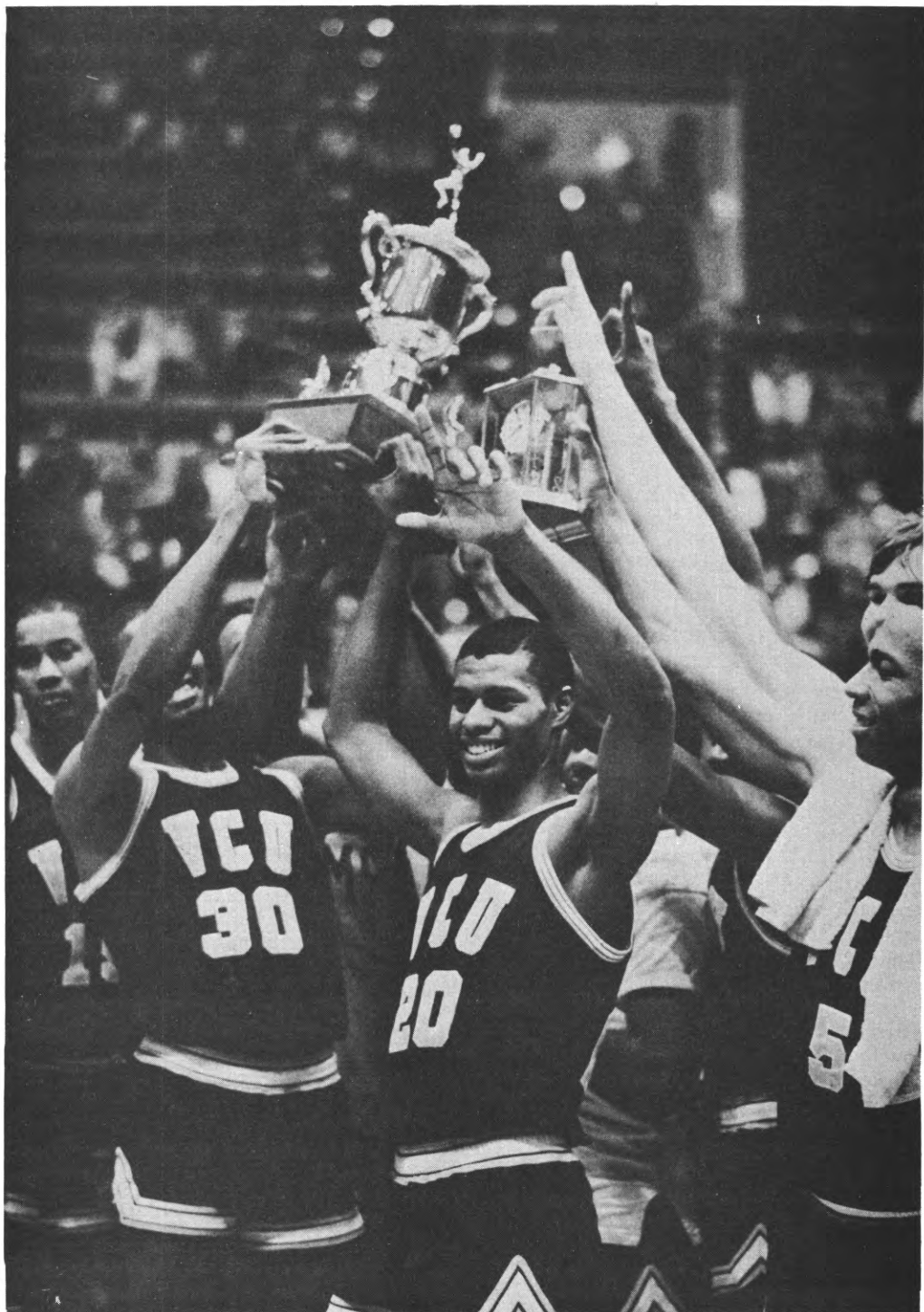
Refer to Part V of this bulletin.

Placement Tests

The university provides placement testing to assist students in starting at the appropriate level in mathematics, foreign languages, and reading. The Test of Standard Written English (TSWE) section of the Verbal Scholastic Aptitude Test (SAT) is used for placement in English. The orientation, advisement, and registration brochure sent to new students provides specific information about the curricula requiring these tests.

GRADUATE SCHOOL ADMISSIONS

A university graduate bulletin describing requirements and procedures for admission to graduate programs will be sent upon request. Address all inquiries to the School of Graduate Studies, Box 568, 1101 East Marshall Street, Richmond, VA 23298-0001.



VCU's basketball team has been the winner of the Sun Belt Conference three times since joining it in 1979-80.

PART III—Expenses and Financial Aid

FEES AND EXPENSES

It is expected that students shall pay all applicable fees described in this section when due. Students failing to pay their applicable fees when due will be subject to a late payment fee. Students are reminded, however, that the university reserves the right to revise or alter all fees, regulations pertaining to student fees, and fee collection procedures whenever such revisions or alterations are deemed necessary.

It should be stressed that a student will incur not only those expenses for which he is billed by the school, but will, in addition, pay for clothing, books, supplies, travel, and many out-of-pocket expenses. Accordingly, each student should make allowances for such expenses in figuring the total cost of each year at the university.

Every student has the responsibility to keep a current mailing address on file with University Enrollment Services/Records and Registration.

FEE SCHEDULE

The dollar amounts of the fees categorized and described in this section appear in the VCU Schedule of Fees and Expenses. This publication is available each June, upon final determination of fee amounts by the Board of Visitors. The Schedule of Fees and Expenses may be obtained at the reception desk, University Enrollment Services, 821 West Franklin Street; at the Information Desk, 901 West Franklin Street; at the

Office of Student Accounting, 327 West Main Street; at the Financial Aid Office, 327 West Main Street; and by writing or phoning University Enrollment Services and requesting current fee information.

TUITION DETERMINATION AND STUDENT CLASSIFICATION

Tuition is determined by both the student's residency classification and the student's classification as a full- or part-time student.

Eligibility for in-state tuition benefits is determined by Section 23-7.4 of the Code of Virginia (refer to page 322 of this bulletin.)

All non-Virginia resident applicants to the university (undergraduate, graduate, professional, special non-degree) who desire in-state tuition rates as Virginia residents must complete the Application for Virginia In-State Tuition Rates. The residency determination of the applicant will be conveyed at the time of admission.

New students who have initially been classified as non-Virginians for tuition purposes may request a review of the initial residency determination by contacting UES/Admissions. The admissions office may request that the applicant complete a Student Supplemental Application for Virginia In-State Tuition Rates and submit supporting documents for additional clarification. Continuing students desiring a change of their residency status to in-state tuition rates must submit a completed Student Supplemental

Application for Virginia In-State Tuition Rates with supporting documentation. Requests and applications for a second review must be submitted to UES/Admissions by the appropriate deadline.

Spring Semester – December 10
Fall Semester – August 10
Summer Semester – May 10

Students approved for a change to in-state status for tuition purposes will be notified by mail with copies of their approval letters going to UES/Financial Aid and the Office of Student Accounts. Students denied in-state tuition benefits will also be notified by mail. The denial letter will inform the student of procedures for appeal of the decision.

Students are classified as full-time or part-time based on the total number of credit hours for which they enroll each semester. Full-time students are those students who are enrolled for 12 or more credits in a given semester. An academic year includes two semesters.

Full-time undergraduate students are charged a flat rate tuition fee per semester. Part-time undergraduate students, those enrolled for fewer than 12 credits, are charged tuition on a per-credit basis.

Students who have been classified as Virginia residents pay a lower flat-rate tuition fee as full-time students and a lower per-credit tuition fee as part-time students than out-of-state students.

Evening undergraduate students, who typically are enrolled on a part-time basis, pay the same per-credit tuition fees as their day student counterparts, and tuition assessment is based on their residency classification. However, part-time evening undergraduate students are not charged a per-credit Student Activity Fee, and they are charged a lower per-credit University Fee. Both these fees are described in the following paragraphs.

Student Activities Fee: This fee is determined and assessed by the appropriate student governing body and is used to support activities scheduled throughout the school year (such as concerts, plays, student organizations, and publications). Full-time students pay a flat-rate Student Activities Fee per semester. Part-time day students pay this fee on a per-credit basis. Part-time evening students do not pay this fee.

University Fee: The University Fee is used by the university to support such programs as student facilities, campus development, intercolle-

giate athletics, and other programs. Funds for these programs are allocated annually. Full-time students pay a flat-rate University Fee per semester. Part-time students pay this fee on a per-credit basis.

SPECIAL FEE CHARGES

Because of specialized programs, various schools and departments may charge each student additional fees to cover special materials, equipment breakage, and other costs. The Office of Miscellaneous Accounts Receivable issues bills for School of the Arts Material Fees. These are billed separately and are not included on the Student Accounting bill. For specific information regarding special fees, students should refer to the *VCU Schedule of Fees and Expenses*, or to the specific school or department section within this bulletin.

1986-87 TUITION RATES*

	Virginia Resident	Non-Virginia Resident
REGULAR SESSION		
Full-Time		
Undergraduate	\$1,680	\$4,300
Graduate	\$2,000	\$4,200
Dentistry	\$4,700	\$9,500
Medicine	\$5,400	\$11,000
Pharmacy (UG & GR)	\$2,000	\$4,200
Patient Counseling	\$600	\$1,200
Part-Time (per credit hour)		
Undergraduate	\$70	\$179
Graduate	\$111	\$239
Pharmacy-UG	\$83	\$175
Pharmacy-GR	\$111	\$239
Patient Counseling	\$111	\$239
SUMMER SESSION (1987)		
Full-Time		
Undergraduate	\$840	\$1,680
Graduate	\$840	\$1,680
Patient Counseling	\$225	\$400
Part-Time (per credit hour)		
Undergraduate	\$70	\$140
Graduate	\$70	\$140
Patient Counseling	\$70	\$140
HOLIDAY INTERSESSION (per course) (1986-87)		
Undergraduate	\$125	\$125
Graduate	\$125	\$125

* Subject to change approved by the Board of Visitors.

22 Expenses and Financial Aid

1986-87 FEE RATES*

All Students

UNIVERSITY FEE — REGULAR SESSION

Full-Time (UG, GR, & PR)	\$390
Part-Time (per credit hour)	
Day (UG & GR)	\$16
Evening (UG & GR)	\$14

UNIVERSITY FEE — SUMMER SESSION (1987)

Full-Time (UG & GR)	\$120
Part-Time (UG & GR, per credit hour)	\$10

STUDENT ACTIVITY FEE — REGULAR SESSION (Academic Campus Only)

Full-Time	
Undergraduate	\$40
Graduate	\$26
Part-Time (per credit hour)	
Day (UG & GR)	\$1.50
Evening (UG & GR)	\$0

STUDENT ACTIVITY FEE — SUMMER SESSION (1987)

Full-Time (UG & GR)	\$12
Part-Time (UG & GR, per credit hour)	\$1

STUDENT GOVERNMENT FEE — REGULAR SESSION (MCV Campus Only)

Full-Time (UG, GR & PR)	\$22
Part-Time	\$0

STUDENT GOVERNMENT FEE — SUMMER SESSION (1987)

(MCV Campus Only)	
Full-Time (UG & GR)	\$11
Part-Time	\$0

* Subject to change approved by the Board of Visitors.

ROOM AND BOARD FEES

When a student receives his or her acceptance letter, a room reservation card will be enclosed, if requested on the Application for Admission. If residence hall space is required, the student fills out the card and returns it with a damage deposit. The student is notified of his or her placement in a residence hall or of being placed on a waiting list for residence hall space.

The damage deposit is not credited to the student's room and board charges but remains on deposit to be applied toward possible room damage. As such, the fee shall be returned minus any damage charges, according to the following conditions:

1. If application for room is cancelled in the University Housing Office within the time limits specified in residence hall contract; and

2. When a student at the termination of his or her contract severs connection with the university or the residence hall, provided he or she is not required by university regulation to reside in university residence halls.

A resident forfeits the damage deposit upon withdrawal for any reason from the university residence halls before the termination of the contract. Before any damage deposit is returned to the student, it will be applied to the student's tuition and fee account in the Office of Student Accounting, if the student has an outstanding balance due the university.

Room Rent

Room rent is payable at the time tuition and other fees are due. Rooms in residence halls are rented for the entire academic year of nine months, except in cases involving contracts instituted during the spring and summer terms. Other exceptions may be made for students who complete their course of study at the end of the first semester. Only one semester's room rent is due prior to each semester.

Students should refer to the *VCU Schedule of Fees and Expenses* for exact room and board costs for the academic year. In addition to these room and board charges, students are assessed the *damage deposit* described in the foregoing section.

Board Plan

All undergraduate students, except fifth-year pharmacy students, who live in university residence halls, are required to participate in the board plan unless living in a self-sufficient apartment unit. Students who live off-campus in nonuniversity housing may subscribe to the board plan on any basis. Students may choose either the 10, 15, or 20 meals-per-week plan.

Contracts for board (except in cases involving contracts initiated during the spring and summer terms) are for a two-semester period. Exceptions may be made for students who complete their course of study at the end of the first semester. Only one semester of board charges is due prior to each semester (nonuniversity housing students may pay by the semester also). Students who choose not to subscribe to either board plan may use the cafeteria on a pay-as-you-go basis.

Contractual agreement is implied when a student accepts university room and/or board ar-

rangements. If a resident voluntarily withdraws from the university residence halls without clearance from the director of housing, but remains enrolled at the university, he or she will be responsible for full room and board fees for the remainder of the contract period. Subletting is not permitted.

Exceptions to the above policy can be made only by the director of housing or by the assistant dean of student affairs, coordinator of university housing.

**1986-87
ROOM AND BOARD RATES***

All Students

HOUSING RATES

Rhoads, McRae, & Cabaniss

Double	\$1,570
Single	\$2,140

Johnson, Bear, Rudd, & Warner

Double	\$1,500
Single	\$2,060

Gladding Phase I

Double	\$1,870
Single	\$2,140

Gladding Phase II

Double	\$1,650
Single	\$2,140

Treehouse/Woodcreek

Double (4/unit)	\$1,780
Single (2/unit)	\$2,250

BOARD RATES (estimated)

20-Meal Plan	\$1,290
15-Meal Plan	\$1,260
10-Meal Plan	\$1,230

* Subject to change approved by the Board of Visitors.

STUDENT BILLING

The Office of Student Accounting issues bills to students showing charges for the following fees: tuition, Student Activities Fee, University Fee, private music lessons, School of the Arts fee, non-art major course fees, room rent, board, and Student Health Service Fee.

Tuition and fees for preregistered students, along with charges for room and board where applicable, are due approximately one week before the start of the fall and spring semesters. All other students (not receiving financial aid) must pay at the time of registration.

Off-Campus Credit Instruction Billing

The Office of Miscellaneous Accounts Receivables issues bills to students for off-campus credit instruction tuition. Students enrolled part-time on campus who are taking an off-campus credit instruction course will receive two bills for their tuition.

REFUNDS

Students shall be entitled to refunds according to the policies outlined below. See also Financial Aid Refund policy under "Financial Aid."

Request for Refund. Requests for refunds must be made in writing to the Office of Student Accounting, 327 West Main Street, and will be considered on the basis of the policy statement governing the refund of tuition, room, and board:

1. Students whose registration is cancelled prior to the end of the add/drop-late registration period, will be entitled to a full refund of tuition and fees. Room fees, except for the damage deposit, will be refunded in full during this period.
2. Full-time students reducing their academic status to part-time or part-time students reducing their academic course load before the end of the add/drop-late-registration period will be entitled to a refund of tuition and applicable fees reflecting the reduced course load.
3. Students will be entitled to a refund of 50 percent of tuition, and applicable fees except for private music lessons and the Student Activities Fee upon withdrawal *after* the add/drop-late registration period and before the end of the fourth Friday following the first official day of the semester. Full-time students reducing their academic course load to part-time or part-time students reducing their academic course load after the add/drop-late registration period will be entitled to a 50 percent refund of tuition and applicable fees reflecting the reduced course load. **NO AMOUNT WILL BE REFUNDED FOR WITHDRAWAL AFTER THE FOURTH FRIDAY FOLLOWING THE FIRST OFFICIAL DAY OF THE SEMESTER.**
4. A full refund of board plan fees will be made if withdrawal from the board plan is made prior to the first official board plan day. However, students withdraw-

ing from the university will be granted a refund based on a weekly proration throughout the term, less a \$50 administrative charge.

5. Students will not be entitled to a refund of room fees if they are suspended from the residence halls for disciplinary reasons. Students will not be entitled to a refund of room fees if they voluntarily withdraw from the university residence halls but remain registered for any course(s) at the university unless clearance is granted through the Office of the Dean of Student Affairs. Students will not be granted refunds unless they have completed the withdrawal procedures.

The actual date of withdrawal will be certified by University Enrollment Services. Refunds, when appropriate, will be computed based on that certified date. *Refunds will not be made to students who do not attend classes and have not completed the required withdrawal procedure.* Refund processing can take from two to four weeks. Exceptions to this refund policy are made only in rare instances. Written application for an exception must be filed in the Office of Student Accounting to the Refund Appeals Committee. Students will be notified of the university's action within 14 days of the date of filing.

STATEMENT OF STUDENT FINANCIAL RESPONSIBILITY

A student who fails to meet payments when due may be withdrawn from the university, will be assessed a late payment fee, and will be denied registration for future classes until he/she has paid all amounts owed to the university. If withdrawn, the student may not attend classes until he/she has paid all accrued fees and has been officially reinstated. Withdrawals and reinstatements are the responsibility of University Enrollment Services/Records and Registration. Students withdrawn under this policy will not be relieved of their financial responsibility to the university.

Students with balances owed the university will not be issued degrees, transcript of grades, or grade reports until all charges are paid in full.

This policy is waived for accounts that reflect a balance supported by an awarded scholarship or approved loan on file in the Office of Student Accounting. Students are reminded, however, they are ultimately responsible for any unpaid balance on their account as a result of the sponsor

cancelling or reducing the award.

The university is participating in the Virginia Set-Off Debt Collection Act of 1981. Under the provisions of this act, a Virginia individual income tax refund will be subject to the university's claim for unpaid balances of tuition and fees.

Dishonored Checks

If a student's check for payment of tuition and fees is dishonored by the bank, the student will have five calendar days from date of notification to clear the check. Settlement under these circumstances must be made by either a cashier's check or a money order. If not cleared within this period, the student may be withdrawn from the university. If withdrawn, the student may not attend classes until he/she has been officially reinstated. If payment is not made within one week of the date of withdrawal, a student may not be reinstated for the semester. Withdrawals and reinstatements are the responsibility of University Enrollment Services/Records and Registration. Students withdrawn under this policy will not be relieved of their financial responsibility to the university.

A charge of \$15 will be levied for all dishonored checks.

INSURANCE

The university is not responsible for accidents occurring to students in connection with class, laboratory, shop, fieldwork, athletics, student activities, travel, or other activities. However, the university offers to its students approved insurance providing substantial benefits at group rates. The insurance extends for a 12-month period beginning September 1, or from the beginning of the second semester to the next September 1, and includes coverage for accidents, hospital, medical, surgical, and other benefits for illnesses. Married students may wish to enroll their spouse and children. The university recommends but does not require that all students enroll in the approved student group insurance. All students are required at or before registration to complete a card stating that they do or do not wish to participate in the group insurance plans. For further information, contact the Office of Student Accounting.

OFFICE OF STUDENT ACCOUNTING

The Office of Student Accounting, 327 West

Main Street, Box 2506, Richmond, VA 23284-0001, (804) 786-2228, is responsible for billing those students who enroll in classes during advance registration for tuition, room, board (if applicable), and other fees. During regular registration, this office is responsible for assessment of charges to students. The office also bills third-party payors for VCU charges, and manages financial aid award disbursement. It makes fee refunds to eligible students based on policies stated in this section.

Residency determinations, upon which tuition rates are set, are made by **University Enrollment Services**.

Refund appeal determinations are made by the **Office of the Controller**.

Financial aid applications and award determinations are managed by **University Enrollment Services/Financial Aid**.

FINANCIAL AID

Approximately one-half of the students at VCU are receiving some form of financial assistance from state, federal, or university funds. University Enrollment Services/Financial Aid is committed to helping VCU students gain a college degree, even if their funds are limited, within the confines of available funds.

There are many programs of assistance. The kind of assistance available to a student depends on the family financial situation. To be considered for programs, students and their families will be asked to complete several forms. It is important that these forms are completed fully and accurately and submitted on time. All information given to UES/Financial Aid is held in strict confidence.

Program availability is complicated by the many state, federal, and local agencies that set regulations for the use of funds. Students, as consumers of these funds, have the right under the law to receive clear, accurate information concerning aid programs. This right is protected under Section 493 A of the Higher Education Act as amended in 1976 and 1980.

UES/Financial Aid has two financial aid offices, one located on each campus of the university. Students are asked to use the office on the campus where they intend to enroll. The Academic Campus Office is located at 327 West Main Street, and the MCV Campus office is located in Bear Hall.

Students who have additional questions after reading this section of the bulletin, should write

to UES/Financial Aid, Virginia Commonwealth University, Box 2506, 901 West Franklin Street, Richmond, VA 23284-0001. Students visiting the Academic Campus may wish to make an appointment with one of the professional financial aid counselors by calling (804) 786-5241 (Academic Campus) or (804) 786-0524 (MCV Campus).

UES/Financial Aid can assist students in obtaining three kinds of need-based assistance:

Grants—Awards based on financial need which do not require repayment. Handicapped students or students from low income families are the most eligible for grant programs. Generally, students receive grant funds in combination with loans or work-study.

Loans—Awards that require repayment after a student leaves VCU. These are available to both low income and higher income families.

Work-Study—Part-time employment, generally on campus. Students are paid at the current student wage rate for the hours they work. They receive a paycheck each week.

Aid packages are combinations of these kinds of assistance to put together to meet a student's financial need. The total amount a student receives is based on his/her family's financial circumstances.

GRANT PROGRAMS

The following grant programs are awarded on the basis of a student's family's financial circumstances; no repayment is required.

Pell/Basic Grant—A federal grant program for undergraduate students. The grants may reach a maximum of \$2,100. The applicant must be enrolled for at least six hours of course work.

College Scholarship Assistance Program—A program of grants to Virginia residents who are full-time, undergraduate students with financial need. The grants range from \$400 to \$1,000.

SEOG/Supplemental Educational Opportunity Grant—Federal grant funds administered by VCU for students with exceptional need based on limited family resources. The maximum grant for an academic year is \$2,000.

Virginia Undergraduate Grant—A university program of grant aid to undergraduate students who are state residents and who have high financial need. Awards may range from \$200 to \$1,800 per year.

LOAN PROGRAMS

Loan funds may make it possible for students and/or their families to defer the cost of education by borrowing now and repaying after they leave the university. Loan programs are available to most students; the rate of interest on the loan varies according to the kind of loan for which a student is eligible as a result of the family's financial circumstances. Most long-term loans do not require repayment or begin to accrue interest until a student has left the university.

NDSL/National Direct Student Loan—A deferred payment loan for both graduate and undergraduate students who are enrolled at least half-time. Students are awarded a loan amount based on the family financial information reported to UES/Financial Aid. Students cannot exceed \$3,000 of borrowing during their first two undergraduate years and \$6,000 of borrowing for all four undergraduate years. The maximum loan for VCU students is usually \$1,500 per academic year.

If a student continues at least half-time enrollment, no interest is charged or repayment expected until the student leaves the university. Interest of five percent a year begins six months after a student leaves school and repayment must be completed within ten years. Students will be considered for this program if they apply for financial aid through UES/Financial Aid.

Guaranteed Student Loans—Under current legislation, students from families with an adjusted gross income of \$30,000 or less may borrow up to \$2,500 per class status (that is, freshman, sophomore, junior, senior). The amount of the loan may not be more than the cost of education less any other assistance.

If a student's family income exceeds \$30,000, the student may still be able to borrow if need can be demonstrated. (Need is the difference between the cost of attending the university and the expected contribution of a student's family and other financial assistance.)

The limit on borrowing is \$12,500 for all undergraduate study and \$25,000 for undergraduate and graduate study combined. No repayment of interest or principal is required as long as the student is enrolled at least half-time (six or more hours each semester, five or more for graduate students). Interest at eight percent per year on the unpaid balance of the loan begins six months after the student leaves school. Repayment must be completed within ten years.

At the time the loan is written, it is subject to an origination fee (currently five and one-half percent of the loan) and a guarantee premium (currently ranging from one-half of one percent to one percent).

To obtain one of these loans, students apply directly to a bank or other lending institution in their home area. Additionally, the Virginia Education Loan Authority is a major source of Guaranteed Student Loans to eligible state resident students who are unable to secure loans from private lenders. Information and application forms are available from University Enrollment Services/Financial Aid. The same provisions outlined above apply to this program or any other form of a Guaranteed Student Loan.

If the lender is willing to make the loan, the application is sent to UES/Financial Aid, where budget, financial aid, enrollment, and academic progress information is added. UES/Financial Aid then returns the application to the lender, who sends it to the State Education Assistance Authority (SEAA). Upon approval by the SEAA the lender will issue a check for the approved amount. This process usually takes eight weeks.

Parental Loan for Undergraduate Students (PLUS)—A loan program for the parents of undergraduate students, called the Parental Loan for Undergraduate Students (PLUS), was established by the Higher Education Amendments of 1980. It was later extended to independent undergraduate and to graduate/professional school students by the amendments of 1981.

Under this program, parents may borrow up to \$3,000 a year for a dependent child. If a student takes out a Guaranteed Student Loan (described above), the combination of that loan and the one his or her parents take out cannot exceed the cost of the student's education. Independent undergraduates and graduate students should consult with UES/Financial Aid about the borrowing limits for their loans under this program.

The limit for all borrowers under this program is \$3,000 a year, to a maximum of \$15,000. Repayment begins 60 days after the loan is paid out; there is no in-school subsidizing of these loans. The loan is repaid at the interest rate of 12 percent. This rate is subject to change in the future.

University Loans—A very limited number of long-term loans are made from university funds to students who cannot obtain a National Direct Student Loan or a Guaranteed Student Loan. If students are not eligible for National Direct

Student Loan funds and can provide evidence that they have been refused for a GSL from more than one lending institution, UES/Financial Aid may be able to offer assistance from university loan funds.

Nursing Loans—Funds for students enrolled in the baccalaureate or masters nursing degree program. If a student is accepted into one of these programs and is eligible for National Direct Student Loan funds based on financial need, UES/Financial Aid will revise the aid package to include funds from this loan program instead of NDSL. The terms of this program are similar to those for NDSL.

WORK-STUDY/EMPLOYMENT

If the family financial information reported to UES/Financial Aid indicates that the student and family cannot meet the costs of schooling, the student may be offered work-study eligibility as part of a financial aid package. If a student's financial need is great, this federally funded work program may lessen the amount of loan in the package and give the student the opportunity to work in a residence hall, dining hall, a campus office, or the library.

UES/Financial Aid will assist in the placement of students for whom work-study eligibility has been awarded.

If students' family financial circumstances do not make them eligible for work-study jobs paid from federal money, they can still seek regular campus jobs paid from university funds. Information on regular campus jobs is available by applying directly to the office on campus where the student would like to work.

SUMMER AID

If funds are available, financial aid awards may be made for the summer sessions. Preference is given to students enrolled full-time for the summer and awards are made on the basis of financial information filed for the previous academic year or the new academic year. Applications and information on summer aid are usually available after April 1 in UES/Financial Aid.

FOREIGN STUDENTS

Students who are permanent United States residents, U. S. citizens, or attending with an immigrant visa are eligible for federal assistance programs. Other students from foreign countries

should inquire about services and assistance through the Foreign Student Services Office.

ADDITIONAL AID SOURCES

The Virginia Commonwealth University Scholarship Program

The faculty, staff, and alumni of VCU are committed to maintaining high standards of academic excellence. Part of this commitment is carried out through the VCU Scholarship Program.

The VCU Scholarship Program recognizes undergraduate students who have demonstrated superior personal and academic achievement. The program includes scholarships with a variety of criteria. Financial need is not considered in awarding most of these scholarships. Applications and recommendations are reviewed by members of the university scholarship committees. Their evaluation, combined with applicant test scores, high school grade point average, and class rank, will determine each applicant's place among other applicants in the annual scholarship competition. Applicants who rank among the top of all applicants may be offered a scholarship valued at \$700 to \$1,798 (based on figures for the 1985–86 academic year). Some scholarships are renewable for up to four years.

High school seniors and transfer students with outstanding academic records, demonstrated leadership, creativity, and motivation are encouraged to apply to the VCU Scholarship Program. Graduate students and students working on a second undergraduate degree are not eligible for these scholarships. Preference is given to applicants enrolled on a full-time basis.

Applications must be submitted or postmarked by March 1; however, high school seniors are encouraged to submit applications and two recommendations as soon as possible. Applications may be obtained from UES/Admissions, Box 2526, 901 West Franklin Street, Richmond, VA 23284-0001.

Short-Term Loans

This short-term institutional loan program is used to assist enrolled students with immediate financial difficulties, generally of a personal and unavoidable nature. This loan is not made to students who are attempting to offset normal educational costs. Loans are normally limited to \$200 and repayment is due within 30 days. Information is available from UES/Financial Aid.

DETERMINING A STUDENT'S FINANCIAL AID PACKAGE

Before compiling a student's financial assistance package from the programs described above, UES/Financial Aid must (1) assess the size of the student's financial need and (2) determine the student's eligibility for specific programs. To do this, UES/Financial Aid follows the steps outlined below.

First, from the information provided in the university application for financial aid, a financial aid counselor assigns a budget that reflects such factors as a student's place of residence, marital status, and the campus the student will be attending. The budget includes allowances for tuition, fees, room, board, books, and living and personal expenses.

Second, after receiving a student's financial information, UES/Financial Aid uses standard methods for calculating a family contribution for educational expenses that reflect family income and assets as well as such resources as private scholarships, social security educational benefits, veterans benefits, etc.

Third, UES/Financial Aid subtracts the family contribution from the school year budget which applies to the student. The remaining deficit is considered the student's *financial need* and is the maximum amount the student can receive from institutional, private, state, or federal aid programs. If there is no deficit after this procedure, the student is not eligible for assistance from state and federal aid programs. The student may, however, still qualify for a Guaranteed Student Loan or seek regular campus employment even if there is no computed financial need.

Finally, once financial need is determined, a student's application is considered initially for Pell Grant eligibility, then for loan or work-study, depending on the preference indicated on the financial aid application, and finally for other grant programs. The student who submits the University Aid Form and the College Scholarship Service Financial Aid Form by March 1 will be in the first group for packaging. Students will be ranked in order of greatest need and awards will then be made on the basis of the size of the financial need. If funds for financial aid packages are still available after these students are awarded assistance, additional groups of students will be aided as their applications become complete.

FINANCIAL AID AND ACADEMIC REQUIREMENTS

A student's eligibility to receive funds from university, federal, and state programs is dependent on the number of class hours for which the student initially registers and the number completed. Since most financial aid packages are awarded on the basis of full-time enrollment costs, the student should be aware that the awards will be reevaluated if full-time study is not continued. For financial aid purposes, a full-time academic load for undergraduates is a minimum of 12 hours each semester.

If a student is contemplating part-time study, it is advisable to talk with one of the financial aid staff members about eligibility for assistance. If a student begins the year as a full-time student and later wishes to drop to fewer than 12 hours a semester, it is advisable to see a counselor to discuss the consequences of such action.

Students who are admitted as special students (not in a degree or certificate program) are generally not eligible for financial aid. However, under certain circumstances these students may be eligible for Guaranteed Student Loans. It is advisable to discuss this option with a financial aid counselor.

FINANCIAL AID PROGRESS POLICY

In order to be eligible to receive financial aid from federal, state, or institutional programs at VCU, students must be making progress toward their degree.

A. Progress for financial aid purposes is defined as follows:

1. Undergraduates who are enrolled for 12 or more hours on the 14th day of the semester must complete and receive a grade of A, B, C, D, or F in at least 24 hours of course work. For this purpose, an academic year is defined as two (2) semesters.
2. Undergraduates enrolled for 9, 10, or 11 hours on the 14th day of the semester must complete and receive a grade of A, B, C, D, or F in at least 18 hours of course work each academic year.
3. Undergraduates enrolled for 6, 7, or 8 hours on the 14th day of the semester must complete and receive a grade of A, B, C, D, or F in at least 12 hours of course work each academic year.
4. Undergraduates who are directed into non-credit remedial courses may count

those courses toward satisfying the course load requirement of this policy. The credit hour value of this "0" credit course will be based upon the charges for the course.

5. Graduate students enrolled for 9 or more hours on the 14th day of the semester must complete and receive a grade of A, B, C, D, F, P, or S in at least 18 hours of course work each academic year.
 6. Graduate students enrolled for 5, 6, 7, or 8 hours on the 14th day of the semester must complete and receive a grade of A, B, C, D, F, P, or S in at least 10 hours of course work each academic year.
 7. Course work being repeated may be counted the first time it is repeated in determining if the student was enrolled for the minimum appropriate course load.
- B. VCU undergraduate students who are making progress towards their degree objective may receive aid for not more than six academic years (12 semesters). Semesters in which the student is enrolled less than full-time may be pro-rated.
- C. VCU graduate students who are making progress may receive aid for not more than the number of terms that results from the following calculation:
- $$\frac{\text{hours required for degree}}{24 + 1} = \text{Terms permitted, not to exceed 3 years for master's and 5 years for Ph.D.}$$
- D. Medical and dental students who are required by their academic dean to repeat a year may be allowed to continue on financial aid for that year. Should a student who has previously had to repeat a year be required to repeat another year at a later date, his/her eligibility for aid will be restricted to GSL, PLUS, or HEAL.
- E. Transfer students are assumed to have made progress at their previous institution and will be classified as making progress when they begin their course work at VCU. The number of years of aid eligibility remaining for transfer students will be determined by the following calculations:

$$\begin{aligned} &\text{Total hours required for degree} \\ &- \text{Transfer hours accepted for VCU} \\ &= \text{hours remaining} \end{aligned}$$

(Hours remaining divided by $24 + 1$ - years of aid at previous institutions = the number of years of eligibility remaining.)

- F. Students who apply for financial aid and are not making satisfactory progress are not eligible for financial aid.
- G. Students who are receiving financial aid and who fail to make progress will be placed on financial aid probation. While probationary students will be permitted to retain their financial aid, they must progress at the prescribed rate for their enrollment category; i.e., full-time, $\frac{3}{4}$ time, or $\frac{1}{2}$ time, and achieve at least a "C" average ("B" for graduate students) each term until the probation condition has been removed. Students on probation, who fail to make the prescribed progress and attain the required term GPA, will be suspended from eligibility for financial aid. Eligibility once lost, can be regained only by completing sufficient course work, without benefit of aid, to achieve progress at the prescribed rate.
- H. Students who have been placed on financial aid probation or suspension may appeal their decision if they believe there were extraordinary circumstances, such as prolonged illness, that prohibited them from making progress. Students who make appropriate progress but do not complete the degree requirements within the specified time may request that their eligibility for aid be extended. Appeals to the decision to place the student on financial aid probation or to suspend from eligibility must be in writing and in the hands of the appropriate campus director not later than 30 days after the decision is mailed to the student. The campus director will review the appeal and will either accept the appeal and remove the condition or reject the appeal. If the appeal is rejected, the campus director of financial aid will forward the appeal and the reason for the rejection to the university director of financial aid who will be the final reviewing authority for the appeal. The student will be notified of the results of the appeal.
- I. The director of UES/Financial Aid is responsible for development and implementation of procedures to administer this policy.

REFUND POLICY

If a student withdraws from VCU during the

academic term, a portion of the financial aid already claimed may have to be repaid to the university. For information on refunds, please refer to the "Expenses" part of this bulletin section.

APPLYING FOR ASSISTANCE AT VCU

To complete the appropriate steps for financial aid consideration as a student at VCU, students should follow the steps outlined below.

1. **Complete the Virginia Commonwealth University Aid Form (UAF).** If a student submits the application and financial information to UES/Financial Aid at VCU prior to March 1 and the student has been admitted to a degree or certificate program, that student will be considered for assistance when all programs have maximum funds available. If either the VCU application or the student's financial information reach UES/Financial Aid later than the deadline, the student will be considered for assistance on the basis of remaining funds.
2. **Complete the Financial Aid Form (FAF) of College Scholarship Service.** This form is available after November 1 from high school counseling offices or UES/Financial Aid. This form is submitted after January 1 to College Scholarship Service (CSS) at the appropriate address with a processing fee; this service will process the financial information and forward it to VCU if a student lists VCU and code number 5570 (5408 for MCV Campus) in the box provided for this purpose.

So that College Scholarship Service will be able to forward a student's processed financial information by March 1 to UES/Financial Aid, a student should send the Financial Aid Form (FAF) to CSS no later than February 1. If a student cannot meet this deadline, the FAF should be submitted as soon as possible after that date.

3. **All undergraduates should indicate on the FAF if they wish consideration for the Pell Basic Grant Program** by checking the appropriate box on the CSS Financial Aid Form (FAF).

College Scholarship Service will acknowledge a student's desire for Pell/Basic Grant consideration and forward the FAF information to the Pell/Basis

Grant processing center. The student will subsequently receive a Student Aid Report (SAR) indicating the eligibility (or non-eligibility) for Pell/Basic Grant assistance. The student should submit the Student Aid Report (SAR) to UES/Financial Aid as soon as it is received. UES/Financial Aid will then notify the student of the amount that can be claimed against the coming year's educational costs.

4. **Non-Virginia residents: Students are encouraged to inquire about state grant funds from their state of residence** which could be available to them even if they attend a university outside their state of residence, such as VCU.
5. **While admission to the university is not necessary prior to applying for financial aid**, no assistance will be offered until a student has been accepted for admission. Students should not wait until they have been accepted for admission before filing financial aid materials.

VETERAN EDUCATIONAL BENEFITS

For information on eligibility to receive Veteran Educational Assistance, please contact the Office of Veteran Services, University Enrollment Services/Records and Registration, Room 107, 901 West Franklin Street, Box 2520 Richmond, VA 23284-0001; (804) 257-0977.

To receive educational benefits, the veteran student must comply with the following procedures:

1. Veteran students must request certification each semester and each summer session from the Office of Veteran Services.
2. Veteran students withdrawing from VCU or dropping a course must notify University Enrollment Services and the Office of Veteran Services.
3. Benefits will not be awarded for courses taken on an audit basis. Also, if the veteran student is repeating a course or taking a course with no credits, this must be brought to the attention of the Office of Veteran Services.
4. All courses taken must apply to a degree program. These courses may include elective courses and prerequisite courses as well as the required courses.
5. It is the veteran student's responsibility to see that the transcripts are evaluated to determine the number of transfer credits

accepted by the university and to have this information submitted to the Office of Veteran Services for transmittal to the VA Regional Office.

VIRGINIA WAR ORPHANS EDUCATION PROGRAM

The Virginia War Orphans Education Program provides educational assistance for children, or surviving children, of certain veterans or service personnel. To be eligible for assistance under this program, an applicant must meet the following basic eligibility requirements:

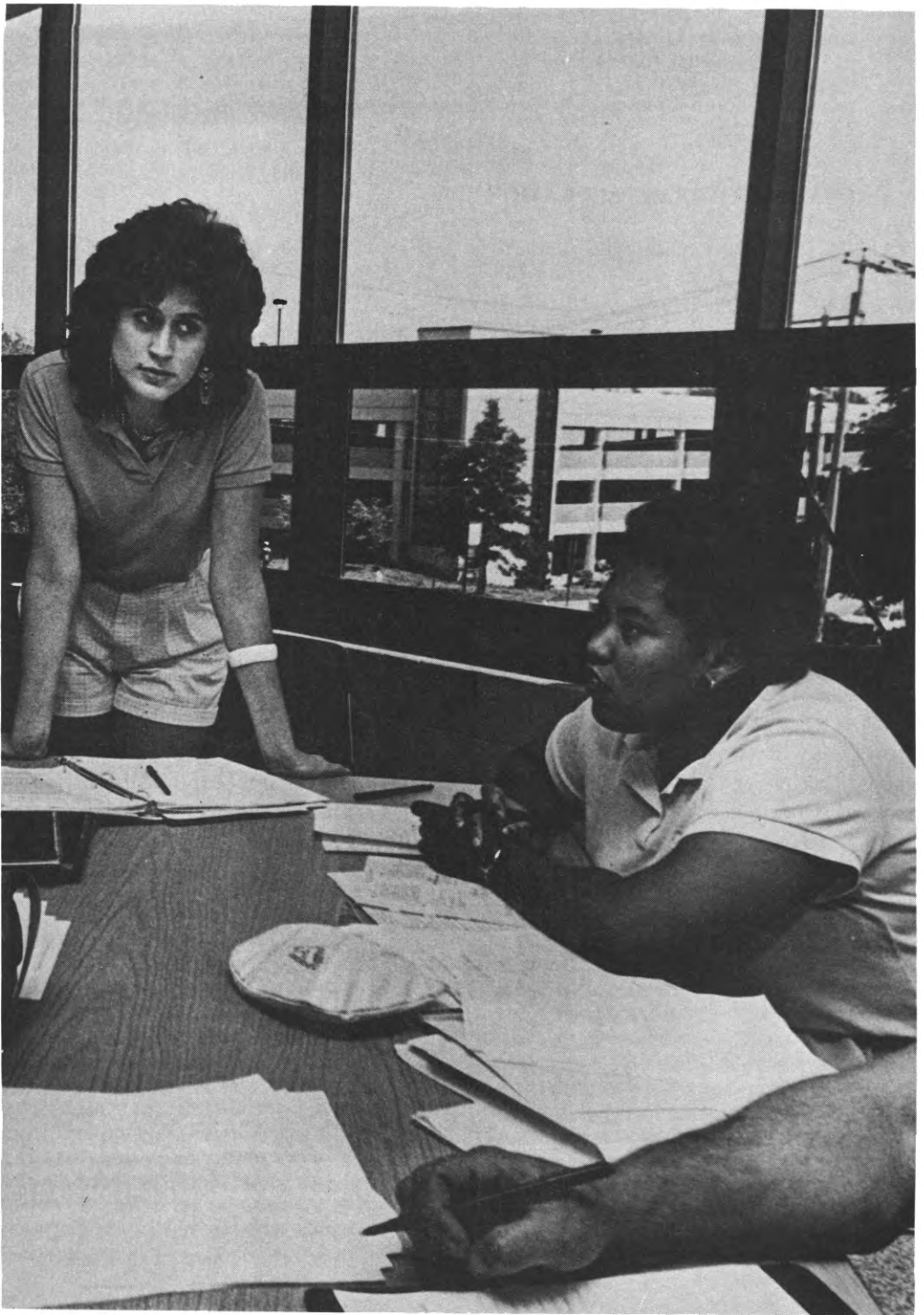
1. The applicant must be no less than 16 years of age or no more than 25 years of age.
2. One of the applicant's parents must have served in the armed forces of the United States, and must be permanently and totally disabled due to an injury or disease incurred in a time of war or other period of armed conflict; or
3. One of the applicant's parents must have died as a result of injury or disease incurred in a time of war or other period of armed conflict; or
4. One of the applicant's parents must be listed as a prisoner of war or missing in action.
5. The applicant's parent, on which eligibility is based, must have been a resident of

Virginia at the time of entry into active military duty; or

6. The applicant's parent, on which eligibility is based, must have been a resident of Virginia for at least ten consecutive years immediately prior to the date of application.
7. The applicant must provide written verification attesting to their acceptance as a student in either a state-supported secondary or post-secondary educational institution.

Individuals eligible for the Virginia War Orphans Education Program are entitled to a tuition-free education at state-supported educational or training institutions on an annual basis (summer school may also be certified in the annual certification of students.) Individuals entitled to this benefit may utilize it to pursue any vocational, technical, undergraduate, or graduate program of instruction. Generally, programs listed in the academic catalogs of state-supported institutions are acceptable provided they have a clearly defined educational objective; i.e., certificate, diploma, or degree.

Requests for applications should be directed to the Director, Division of War Veterans' Claims, Commonwealth of Virginia, 210 Franklin Road, S.W. Roanoke, VA 24011. If possible, applications should be submitted at least four months before the expected date of matriculation.



Students on both campuses participate in a variety of services and programs offered through the Division of Student Affairs.

PART IV — Student Affairs

The university offers a wide variety of services to its students with responsibility for the majority of these services falling under the Division of Student Affairs. Students are encouraged to contact the vice-provost for Student Affairs if they are interested in services not listed below.

DIVISION OF STUDENT AFFAIRS

RICHARD I. WILSON

Vice-Provost for Student Affairs

The Division of Student Affairs provides services and programs on both campuses designed to promote the broadest possible development of excellence and integrity in both the individual and the university as a societal institution. These functions vary in formality, content, and setting and are usually student centered.

Services under the Dean of Student Affairs Office, the Dean of Student Affairs Office for the MCV Campus, the University Counseling Service, Student Activities/University Student Commons, University Student Health Services, and Career Planning and Placement are administered by the Division of Student Affairs. The Office of the Vice-Provost for Student Affairs is located in the Siddering House, 901 Floyd Avenue, Box 2512, Richmond, VA 23284-0001, (804) 257-1244.

SERVICES FOR STUDENTS

Dean of Student Affairs

WILLIAM H. DUVAL

Dean of Student Affairs

ELLEN D. PEARSON

Assistant Dean of Student Affairs

The Office of the Dean of Student Affairs coordinates the programs and services of Career Planning and Placement, student housing, residence education, international students, and students with disabilities. Emphasis is placed on providing services and resources to help students discover their talents and find a place in society through which these talents can best be fulfilled. The Office of the Dean of Student Affairs is located in the Siddering House, 901 Floyd Avenue, Box 2525, Richmond, VA 23284-0001, (804) 257-1643.

The University Student Commons Information Desk is staffed by students who can provide information regarding activities and events taking place daily on the campus. The student staff can answer questions, find information, give directions, and make referrals. In addition to these services, the Student Government Association on the Academic Campus, through the Information Desk, maintains the kiosks in the Student Commons and the outdoor kiosk on the Park Avenue side of the James Branch Cabell Library where posters and handbills advertising upcoming events are displayed. The phone number for the Information Desk is (804) 257-1981.

The Campus Source is a large calendar and electronic message board which lists campus

activities. The Campus Source is available in both the University Student Commons and the Cary Street Recreation Complex.

SAM is a 24-hour telephone service which gives callers information about Student Activities and Meetings (SAM). The information is updated daily to provide the most accurate information available. To reach SAM, call (804) 257-6423.

Various publications of the Division of Student Affairs also provide useful information to students. The *Directory of Student Services* lists all services available at the university and contains the full text of several university policies that affect students. The *Student Affairs Handbook* contains information on getting involved in campus life, a list of registered clubs and organizations, information on special programs and events, and a directory of frequently called phone numbers. The *Directory of Registered Clubs and Organizations* lists all such groups on the Academic Campus, and includes organizational purposes, contact persons, and faculty advisors. Copies of all of these publications are available at the Office of Student Activities/University Student Commons which is located in the Commons at 907 Floyd Avenue, Box 2032, Richmond, VA 23284-0001, (804) 257-6500.

Automobiles

Because of the absence of reserved student parking on campus during the daylight hours and extremely limited off-campus parking, the university recommends that residence hall students not bring their automobiles to Richmond. Unauthorized vehicles parked on campus will be subject to ticketing and towing at the owner's risk and expense.

Daytime parking is available for students at the parking deck located on Main Street with entry from either Cherry or Laurel Streets. Students may apply for evening parking (after 3:30 pm) in university lots which allow parking in any double-lettered university lot except HH and OO lots, and MM lot and the academic deck on the nights of events in the Mosque. The Parking Office is located at the Valentine House, Box 2522, 920 West Franklin Street, Richmond, VA 23284-0001, (804) 257-1799.

University Student Health Services

CHUN-WAI CHAN, M.D., M.P.H.
Director, University Student Health Service

BETTY ANNE JOHNSON, M.D., Ph.D.

Assistant Medical Director

MARGOT KEPPEL, M.H.A.

Assistant Director for Administration

BETTY REPPERT, PA-C

Assistant Director for Health Promotion

The University Student Health Service (USHS) offers quality health-care services for the treatment of acute illness that may develop during a student's stay at the university and for the maintenance of chronic disease. In addition to diagnosis and treatment, the service emphasizes prevention of illness through screening, counseling, and health education.

Students enrolled in the USHS plan are covered for all services, examinations, consultations, and minor procedures performed by USHS nursing and physician staff; all laboratory tests done on the premises; all medication prescribed by USHS staff except for medication for chronic illness; and routine gynecological care. Students may receive allergy injections if they supply the serum for hyposensitization. All educational activities sponsored by USHS are available to enrolled students including educational literature, video cassettes, weight reduction classes, and health-related programs on topics of interest to students.

Accidental injury and hospitalization are not covered by USHS, and students are urged to take advantage of the university-sponsored health insurance plan. All full-time MCV and residence hall students are eligible for USHS services. Other students wishing to enroll should contact the Student Health Office.

The USHS offices are located in Suite 159, Gladding Residence Center, 711 West Main Street, Box 2022, Richmond, VA 23284-0001, (804) 257-1212, on the West Campus and on the second floor of the A.D. Williams Building, 1201 East Marshall Street, Box 201, Richmond, VA 23298-0001, (804) 786-9212, on the MCV Campus.

University Counseling Services

JOHN G. CORAZZINI

Director

JENNINGS COX

Staff Psychologist

VALERIE BATTS

Staff Psychologist

THERESE MAY

Staff Psychologist

ERIC ORITT

Staff Counselor

NAPOLEON L. PEOPLES

Staff Counselor

MARY B. SONN
Assistant Director

University Counseling Services (UCS) provides a wide range of services designed to meet the personal, social, vocational, and educational needs of students:

Individual and group counseling (for individuals who share concerns) enable individuals to learn the process of dealing more effectively with problems in living, coping with stress or depression, or increasing the general level of satisfaction with their lives. Together, students and their counselors identify primary areas of concern and set realistic goals for dealing with these issues. The counseling process often involves improving self-understanding, learning new behaviors, or eliminating self-defeating behaviors.

Career counseling and programming help students identify their interests, abilities, values, and needs. Through the use of self-exploration, homework exercises, and vocational testing, students are assisted in planning their academic and career goals.

Stress management programs enable students to cope more effectively with the many stresses in the university environment through the teaching and practice of physical, cognitive, and behavioral stress management techniques.

Consultation and outreach provides psychological services to individuals and organizations affiliated with the university in an effort to enhance their development. Goals are accomplished through activities including (1) liaisons with student and faculty groups, (2) programmatic interventions, (3) educational activities, and (4) environmental modifications. Included under programmatic intervention are the structured group program and the multicultural training program.

Initial interviews are offered on a walk-in, first come, first-served basis on the Academic Campus and by appointment on the MCV Campus. Students are eligible for 14 sessions per academic year. Strictly confidential, U.C.S. sessions are free except for selected tests.

Hours of operation:

Academic Campus	Monday–	
	Thursday	8 am–6 pm
	Friday	8 am–4:30 pm
	Summer hours	
MCV Campus	Monday–Friday	8 am–4:30 pm
	Monday–Friday	8 am–4:30 pm
	Tuesday only	8 am–6 pm
	Summer hours	
	Monday–Friday	8 am–4:30 pm

Foreign Students and Visitors

The university subscribes to the intent and purpose of the Mutual Educational and Cultural Exchange Act, the regulations of which permit foreign students and visitors to become a part of the university community to pursue their objectives.

The university has a foreign student advisor on each campus who meets with all foreign students after their arrival, counsels and advises them in their adjustment to the university, and prepares the necessary government forms needed by foreign nationals to maintain correct visa status with the U.S. government. Students may contact the foreign student advisor located at Anderson House, 913 West Franklin Street, Box 2525, Richmond, VA 23284-0001, (804) 257-1643.

Career Planning and Placement

JEAN M. YERIAN

Director

SUSAN B. SPENCER

Associate Director

BRUCE P. MATTHIAS

Assistant Director

SUSAN B. BROCK

Assistant Director

MARY MEADE SAUNDERS

Assistant Director

EVELINA M. DAVIS

Evening Coordinator

Career Planning and Placement helps students discover more about themselves, explore career options, decide about directions, and develop sound strategies for reaching their career goals.

VCU offers many resources through the Career Planning and Placement Office. The Career Planning Resource Center provides

- computerized career searches
- an up-to-date microfiche occupational brief file
- a complete career information system (books, videos, cassettes)

- information on employers (annual reports, recruiting brochures, directories) and on educational opportunities at the graduate level.

For undergraduate students who have not yet chosen a major, there is an audio-cassette series called "Majoring in . . .," which answers questions about various Academic Campus majors. Each tape includes an interview with a department member who discusses degree requirements, common graduate study areas, and typical entry-level jobs for bachelor's level graduates, as well as other topics of interest to prospective majors.

Students also have the opportunity to participate in special career planning groups and to meet with a staff member for career counseling. Two popular topics for individual sessions are resume reviews and referrals to RamSCAN, the Student Career Advisory Network. RamSCAN allows students to talk with VCU alumni already active in their career fields.

Career Planning and Placement maintains a job bank of both part-time and full-time openings. For alumni and other VCU community members who are currently in an active job search for full-time permanent positions, the office publishes a weekly job leads newsletter called *Career Classifieds*. Both this newsletter and the interview notice newsletter, *Placement Preview*, are available on a no-charge, subscription basis.

Students may learn job search skills by participating in small-group workshops on such topics as interviewing techniques. The office's program center is available to classes and student organizations in addition to being the location for the office's own programs and for an extensive video library on job search topics.

Seniors finishing within the academic year use the Career Planning and Placement office to interview with business, industry, government, and education representatives who visit the office seeking prospective graduates for anticipated openings in their organizations. To take advantage of this service, graduating students need to register early for the On-Campus Interview Program as the first visits are in October and some recruiters come to campus only once a year.

Although any degree-seeking student or alumna may use it, the office's credentials service exists primarily for graduate school applicants and for employment candidates in the education

and human services fields. A credential file provides a convenient way to send employers or graduate/professional schools such information as resume, transcript(s), and recommendations.

All students are urged to use the resources of Career Planning and Placement, located at The Ginter House, 2nd floor, 901 West Franklin Street, Box 2007, Richmond, VA 23284-0001, (804) 257-1645. The Career Planning Resource Center is open Monday–Thursday, 8 am–7:30 pm, and Friday, 8 am–4:30 pm; the main office (credentials service) is open Monday–Friday, 8 am–4 pm.

University Policies and Procedures

There are a number of policies and regulations at the university which affect students. Many of these are printed in Parts II, III, and V of this bulletin. Three policy documents are of particular interest to students. The *Virginia Commonwealth University Rules and Procedures* document outlines the rights, responsibilities, and privileges of each member of the university community, and describes the process whereby disciplinary action, including separation from the university, may be taken against a member of the university community as a result of behavior demonstrating the prohibited conduct outlined in the document. The *Academic Integrity Policy* defines academic dishonesty and provides a procedure for judging alleged violators of academic integrity. The *Grade Review Procedure* outlines a process whereby students may appeal grades which they feel have been unfairly assigned. Each student is responsible for being familiar with the provisions of all university policies and regulations. The policy documents described above are printed in full in the *Directory of Student Services* which is distributed on campus each year and is also available at the Office of the Dean of Student Affairs located in the Siddering House, 901 Floyd Avenue, Box 2525, Richmond, VA 23284-0001, (804) 257-1643.

Student Housing

HARRY R. HESTER

Assistant Dean of Student Affairs and Coordinator of University Housing

BERNARD A. MANN

Director of Housing

Vacant

Coordinator of Residence Education

Living accommodations on- and off-campus are provided for the convenient housing of stu-

dents and to further the educational objectives of the university. Approximately 3,100 students live in university-operated housing which varies in capacity and style including high-rise residence halls, suites and apartments on campus, and leased apartments off-campus.

The university believes that residence living provides an opportunity for students to gain a variety of personal learning experiences which supplement and complement the formal learning gained in the classrooms and laboratories. The program seeks to make residence units a place where students can

- learn to meet and live successfully with other students
- assume major responsibility for their own lives and the atmosphere of their living environment
- participate in a variety of educational and social programs
- develop leadership skills through participation in residence governmental, social, and judicial organizations.

The residence education staff facilitates these objectives and is always available to assist students in the residence areas.

Although acceptance for admission to the university does not guarantee housing facilities to the new student, all students who desired space in university-operated housing have been accommodated in previous years. Assignment to space in housing facilities does not guarantee the occupant that housing will be available during the student's entire tenure at the university. (See the Room and Board Fees section of Part III.)

Rooms in university-operated housing are rented for the entire academic year of nine months unless other arrangements are made. The student, parent, or guardian contracts to pay the rent for this period.

All rooms are adequately furnished, but some students may wish to add personal touches and conveniences of their own. As the buildings vary in age and occupancy, it is best to wait until arrival to decide on the extra furnishings. Students should provide their own pillows, bedspreads, linens, and blankets. Coin-operated washers and dryers are located in each building.

For further housing information, contact the Housing Office located in the Gladding Residence Center, 711 West Main Street, Box 2517, Richmond, VA 23284-0001, (804) 257-6495.

Off-Campus Housing

Although the university does not control or monitor privately-operated off-campus housing facilities, assistance in the location of non-university-controlled residences which rent to students on a nondiscriminatory basis is provided by the Off-Campus Housing Office. Classified sections of the Richmond Newspapers are also helpful in locating nearby available housing. It is advisable for the student to personally inspect off-campus accommodations before contracting. Good quality apartments and rooms are limited, and interested students should make arrangements early.

For further off-campus housing information, contact the Off-Campus Housing Office located in the University Student Commons, 907 Floyd Avenue, Box 2032, Richmond, VA 23284-0001, (804) 257-6492.

Food Service

ROBERT MONROE
Food Administrator

All undergraduate students living in university-operated residence halls are *required* to participate in the university board plan for meals unless they are living in self-sufficient apartment units with kitchen. This policy makes the board agreement *mandatory* and *automatic* for all undergraduates choosing to live in university housing unless the student is in a self-sufficient apartment. Students not living in university-operated housing and commuter students are encouraged to use the cafeteria either on the contract plan or for meals on an individual basis. Students may choose the 10, 15, or 20 meals-per-week plan.

A contract for the board plan (except cases involving a contract initiated for the spring term) is for a two-semester period. If a student with a signed board contract voluntarily withdraws from the board plan without clearance from the Office of the Food Service Administrator, but remains enrolled at the university, he/she will be responsible for full board fees for the remainder of the contract period.

The Office of the Food Service Administrator is located at the Meredith House, 1014 West Franklin Street, Box 2510, Richmond, VA 23284-0001, (804) 257-8077.

Student Identification Cards

Students should carry their I.D. cards with them at all times and should be ready to show

them to any authorized university official who might request their identification. The cards are also required for numerous university functions such as borrowing books from the library. Students should obtain or validate their I.D. cards during registration. Any student who loses an I.D. card should apply to University Enrollment Services/Records and Registration for a replacement. There will be a charge for replacement.

ACTIVITIES FOR STUDENTS

Students and University Governance

The University Council, an advisory body to the university president, is the highest internal governance body of the university. The University Council has 27 faculty, ten students, ten administrators and four subcommittees: the Executive Committee, the Committee on Student Affairs, the Committee on Academic Affairs, and the Committee on Faculty Affairs.

As a result of a referendum and elections held during the fall semester 1979, the Academic Campus Student Association was created and the newly-elected student senators formally began the new association in January 1980. Each of the six schools on the Academic Campus, as well as all students who have not matriculated into schools, are represented in the Student Senate. Elections for student senators are held each spring during the period of preregistration for fall classes. The senate is organized into committees, and all meetings of the senate are open to the public. The name of the senate was changed to the Virginia Commonwealth University Student Government, Academic Campus, in the fall semester, 1983. Additional information can be obtained from the Student Government office, located in the University Student Commons, 907 Floyd Avenue, Box 2032, Richmond, VA 23284-0001, (804) 257-6509.

Student Media

Commonwealth Times. Students write and edit the *Commonwealth Times*, a weekly campus newspaper containing news, features, editorials, and reviews of timely topics. The offices are located at the Millhiser House, 916 West Franklin Street, Box 2010, Richmond, VA 23284-0001, (804) 257-1058.

Reflections in Ink. This publication is published monthly in newspaper format and serves as a medium for distributing news for and about black students at VCU. The offices are located at

the Millhiser House, 916 West Franklin Street, Richmond, VA 23284-0001, (804) 257-8018.

Richmond Arts Magazine. The student-published literary and visual arts magazine is a two-dimensional showcase for the work of students, faculty, and area artists. The magazine is distributed free on campus. The offices are located at the Millhiser House, 916 West Franklin Street, Richmond, VA 23284-0001.

WVCW. The student-operated radio station uses a carrier current line to some residence halls and cafeterias. Programming includes music, information, news, public affairs, and public service announcements. Station facilities are located at the Millhiser House, 916 West Franklin Street, Box 2023, Richmond, VA 23284-0001, (804) 257-1061.

Office of Student Activities/University Student Commons

KURT J. KEPPLER

Director

TERRI DELAHUNTY

Associate Director for University Student Commons

REVIS COX

Assistant Director for Student Activities

SUSAN IVIE

Assistant Director for Student Recreational Programs

HENRIETTA FOX

Manager of Student Organizational Accounts

PAUL BAKER

Senior Program Coordinator

EDITH WHITE

Program Coordinator

DIANA CAPAS

Program Coordinator

BART HALL

Facilities Coordinator

KEVIN MARBURY

Recreation Coordinator

KATHY JONES

Coordinator, Outdoor Adventure Program

DAWN KENNY

Coordinator, Leisure Lifestyle Program

The Office of Student Activities/University Student Commons provides services to the VCU student community through program coordination, student group advisement, information dissemination, and facilities management of the University Student Commons, and Cary Street Recreational Complex.

The University Student Commons is a focal point of student life on the campus, and is a major facility for student meetings, organizational programs, and other leisure-time activities. The facility contains the Park Place

cafeteria and the Common Ground, a deli/pub area. There are also lounge areas, meeting rooms, a theater, games room, student organization area, banking machine, sundry sales area, and an information desk. During the academic year, the Commons is open Monday–Thursday from 7 am until 12 midnight, Fridays 7 am until 1 am, Saturdays 10 am until 1 am, and Sundays 10 am until 10 pm. The Office of Student Activities/University Student Commons is located in the Commons, 907 Floyd Avenue, Box 2032, Richmond, VA 23284-0001, (804) 257-6500.

Student Programs and Involvement. Numerous opportunities are available for students to participate and provide leadership in social, cultural, service, and recreational activities and organizations. Students determine their own level of involvement, bearing in mind the need for a balance between academic and extracurricular programs. Examples of various programs available include the Leadership Education Program for officers in student organizations; the College Bowl; Black History Month and Kwanza; and the lecture, concert, and film committees, which are a part of the VCU Student Government Association.

Student Organizations. Approximately 150 student clubs/organizations exist at VCU and reflect the social, recreational, educational, political, or religious interests of the student body. Examples of organizations include fraternities and sororities, departmental and professional groups, interest groups such as the Black Student Alliance and the Chess Club, and service-oriented groups. The names of the current presidents of all currently registered organizations is available from the Office of Student Activities/University Student Commons.

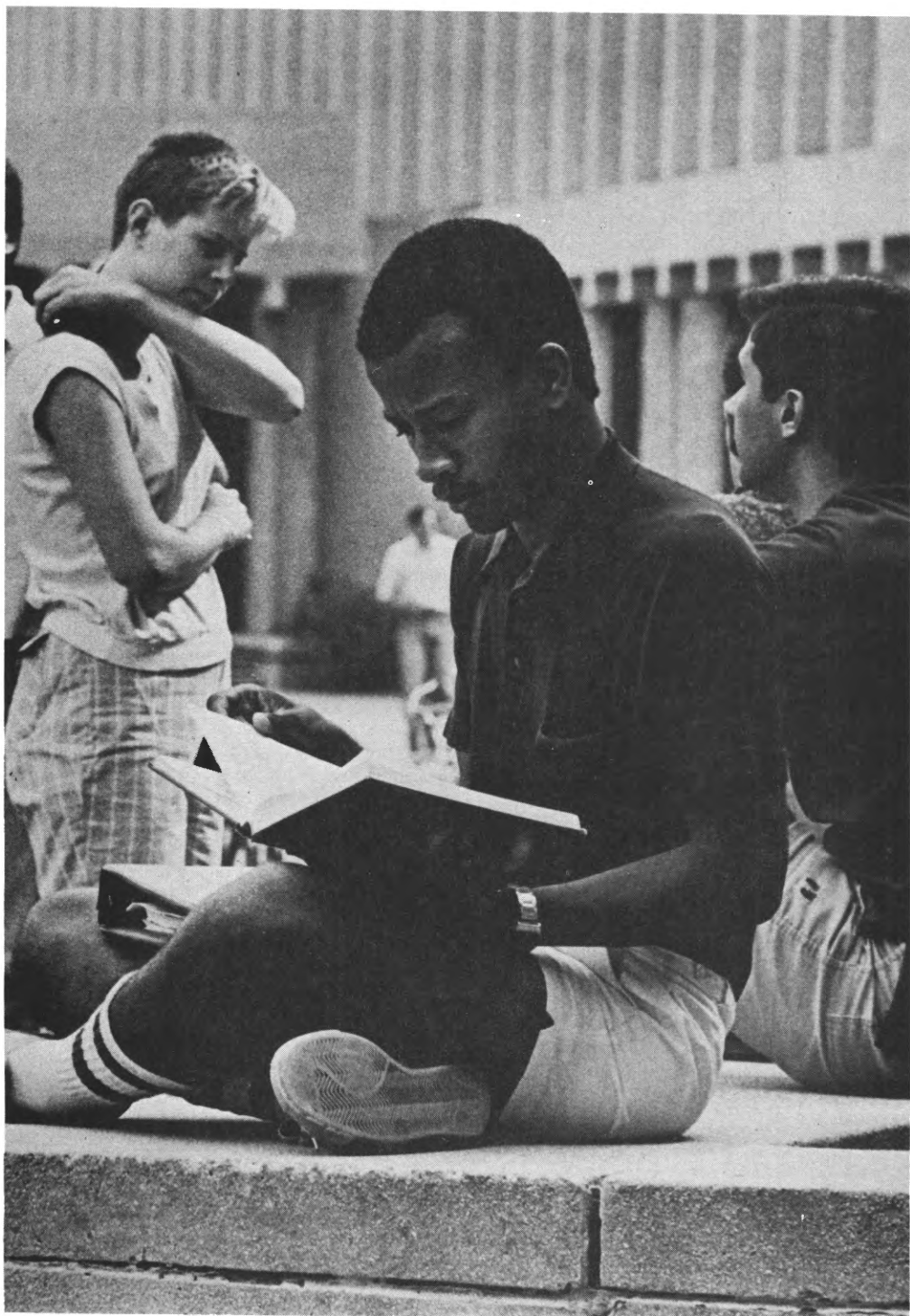
Cary Street Recreation Complex. The complex includes a gymnasium which features basketball, volleyball, badminton and team handball, free weight and machine weight rooms, racquetball courts, multi-purpose field, and jogging track. Numerous recreational activities are offered including instructional

classes in aerobics, racquetball, weight training, open recreation, and tournaments. Information on all recreational activities can be obtained at the Cary Street Recreation Complex, 911 West Cary Street, Box 2029, Richmond, VA 23284-0001, (804) 257-6219.

Intramural sports offer students the opportunity to participate in organized men's, women's, and co-recreational leagues and tournaments. A diverse array of activities includes traditional team sports like flag football, basketball, and softball, as well as innovative activities such as pickleball, wallyball, 5K runs, and innertube waterpolo. Contact the Cary Street Recreation Complex, 911 West Cary Street, Box 2029, Richmond, VA 23284-0001, (804) 257-6219 for additional information.

Club sports are popular on campus and currently include men's rugby, track, weightlifting, fencing, and women's soccer. Contact the Cary Street Recreation Complex, 911 West Cary Street, Box 2029, Richmond, VA 23284-0001, (804) 257-6219 for additional information.

The Outdoor Adventure Program and Outing Rental Center provide a variety of outdoor recreational opportunities for students. Organized excursions with experienced trip leaders include camping, white water rafting, canoeing, caving, climbing, bicycling, backpacking, windsurfing, and cross-country skiing trips, many of which are designed for beginners. All necessary equipment is included in the trip fees. For students planning their own outdoor activities, equipment rental is available through the Outing Rental Center. For a nominal fee, canoes, backpacks, tents, and cross-country skis can be rented on a short-term basis. Information on trips and equipment rentals can be obtained from the Outing Rental Center, currently located at the rear of the Millhiser House, 916½ West Franklin Street, Box 2032, Richmond, VA 23284-0001, (804) 257-6043. The center may be moved to a new and larger location at 901 Floyd Avenue in the future.



VCU students come from 46 states and 42 foreign countries.

PART V — Academic Regulations and General Degree Requirements

ADDRESS

Every student has the responsibility to keep a current mailing address on file with University Enrollment Services/Records and Registration.

ADVISING PROGRAM

Students are responsible for knowing and fulfilling all general and specific requirements relating to the completion of their degree program as described in this section.

An integral part of the student's academic program at VCU is individual student advising. A degree-seeking student is assigned a faculty advisor who is available for academic and career advising. Special (nondegree-seeking) students are encouraged to seek advice from the Advising Center, Room 114, 901 West Franklin Street. Additional assistance for all students is available from the Counseling Center and the Office of Career Planning and Placement.

ATTENDANCE REGULATIONS

The establishment of attendance criteria is the responsibility of each school, and thus will vary from school to school and class to class. Instructors are responsible for clearly informing the student in writing of the attendance requirements for each course and the consequences of poor attendance. Students must abide by the require-

ments as announced in each separate class even though the requirements may vary widely among courses. Students may not enroll in two courses meeting at the same time without the written approval of the chairman of each involved department.

The instructional program at VCU is based upon a system of class meetings involving lectures, discussion, special reading, and reporting assignments. Therefore, it is important for each student to be in attendance on a regular basis. If a student misses a class session, it is the student's responsibility to complete all material covered or assignments made during the absence. Instructors are not required to provide make-up tests or examinations for students.

When warranted, an instructor will mail attendance warnings to students faced with being dropped from a course for non-attendance. Receipt of this form indicates a serious attendance deficiency requiring the student to contact the instructor and to take immediate corrective action. Warnings will be sent to the student's mailing address of record.

Any student in attendance difficulty should contact the instructor to explain the reasons for nonattendance and to discuss the feasibility of continuing in the course. If, in the opinion of either the student or the instructor, *the student* has fallen so far behind that successful completion of the course is impossible, the student

should withdraw from the course prior to the end of the first eight weeks of classes. In the absence of an official withdrawal and continued non-attendance, the instructor may withdraw the student for nonattendance with a mark of "W," or assign a final academic grade. Attendance withdrawals are not permitted after the end of the first eight weeks of classes. For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one-half of the course has been completed. Withdrawal dates for each summer session are published in the summer studies catalog.

CHANGE OF MAJOR

If students wish to change their major area of concentration, they may initiate this change under the following conditions:

1. Change of Major Forms are available in University Enrollment Services/Records and Registration. Requests for change will become effective upon delivery of the form to the appropriate school or department and notification by that office of acceptance into the new major.
2. Students are advised to review the requirements and prerequisites of the program they wish to enter before initiating a change of major. Certain programs, including those in the Schools of the Arts, Business, Education, and Mass Communications, have additional requirements a student must fulfill before being accepted as a degree-seeking student. To assist students planning a change of major, audio tapes describing each major offered at VCU are available for review at both the Career Planning and Placement Office and the Cabell Library.
3. Students who are currently enrolled in a program on the MCV Campus and who wish to change to a curriculum on the Academic Campus will do so through a change of major. Such students are subject to the continuance policy of the Academic Campus in making a change of major.
4. Students should be aware that credits previously earned at VCU or at another university may or may not be applicable to their new major.

CLASSIFICATION OF STUDENTS

Full and part-time degree-seeking students are classified by credits earned as follows:

Freshmen	1 to 23 credits
Sophomores	24 to 53 credits
Juniors	54 to 84 credits
Seniors	85 credits and above

REGISTRATION POLICIES

Student Load

The semester credit is the quantitative unit by which courses are measured. A semester credit is defined as one hour per week of lecture-recitation or not less than two hours per week of laboratory work, field work, internship, or studio work throughout a semester. For purposes of computing student load, MAT 001 or ENG 001 is equivalent to three semester hours but carries no academic credit.

Full- or Part-time Students

Student load is the total number of credits for which a student is enrolled in any semester. The student enrolled in 12 or more credits during any semester is classified as "full-time." The student enrolled in 11 credits or less during any semester is classified as "part-time."

The degree-seeking student may be either a "full-time" or "part-time" student. See Categories of Student Enrollment in Part II of this bulletin.

Overload

The maximum number of credits for which a degree-seeking undergraduate student may enroll in any semester without special permission is 19, excluding holiday intersession courses. More than 19 credits is an overload. Permission to enroll in 20–21 credits may be granted upon the approval of the student's advisor and the academic dean. An Overload Approval Form may be obtained from University Enrollment Services/Records and Registration. See Categories of Student Enrollment in Part II of the *Bulletin* for overload limits for special (non-degree-seeking) students.

No student may attempt more than 21 credits in any one semester.

Regarding credits earned concurrently at another institution, refer to "Concurrent Registration," page 43 of this bulletin.

Cancellation of Registration

A cancellation of registration must be made prior to the end of the "Add-Drop" period by notifying in writing University Enrollment Ser-

vices/Records and Registration. Refunds will be issued in accordance with procedures set forth under Refunds in Part III, Expenses and Financial Aid, of this bulletin.

See also Withdrawal from the University below. For readmission guidelines, see Part II of this bulletin.

Withdrawal From The University

To withdraw officially from the university, a student must submit a completed Official Withdrawal Form to University Enrollment Services/Records and Registration before the end of the first eight weeks of classes. For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one half of the course has been completed. This withdrawal form may be obtained from University Enrollment Services. Failure to complete this form may result in the assignment of failing grades in all or some of the courses.

The student's permanent academic record will indicate a mark of "Withdrawn" (W) for all courses in which the student was enrolled. Refunds will be issued in accordance with procedures set forth under Refunds in Part III, Expenses and Financial Aid, of this bulletin.

A student who withdraws from all courses during a semester may attend the following semester without submitting an application for readmission. A student who does not attend VCU for four or more successive semesters (including summer) must submit an application for readmission to University Enrollment Services/Admissions. This must be done prior to the suggested deadline date for submitting readmission applications for the semester in which the student wishes to return.

See also Cancellation of Registration above.

CHANGE IN REGISTRATION

Once a student has registered for classes, changes in registration may be made only according to the following procedure:

During the Add/Drop Period

Dates of add/drop periods before and during the first week of classes are published in the schedule booklet each semester. Changes in registration (drops, adds, changes from credit to audit or audit to credit) during the add/drop periods may be made by completing a Course Request Form and submitting it to University

Enrollment Services/Records and Registration. Courses dropped during add/drop periods do not become part of the student's permanent academic record.

After the Add/Drop Period

Students may not add courses or make changes from audit to credit or credit to audit after the last add/drop period is over, except under unusual circumstances and with the permission of the assistant dean of the school offering the course. (Refer to the calendar in the front of this bulletin for the exact date.) Students may withdraw from classes only in accordance with the following procedures:

1. After the last add/drop period, forms may be obtained only in University Enrollment Services/Records and Registration and must be filed with that office before the student is officially withdrawn.
2. Withdrawals after the last add/drop period and before the end of the eighth week of classes will become a part of the student's academic record with a mark of "W". For classes whose meeting dates do not conform to the semester calendar, the final withdrawal date is the day when one-half of the course has been completed.
3. If a student fails to complete the form when ceasing to attend a class, this will result in the assignment of a failing grade in the course.

When a student makes any change in registration, the student should retain the copy of the new schedule issued as verification of the change.

Concurrent Registration

Students who are enrolled in degree programs at VCU may, with prior approval, take courses at other institutions. Credits earned concurrently at another institution are eligible for transfer to VCU if approval by the students' advisor, department chairman and academic dean is granted before registration at the other institution. A permit to take courses off campus can be obtained from University Enrollment Services/Records and Registration or from the academic deans.

GRADING AND MARKING SYSTEM **Grades and Grade Points**

VCU course work is measured both in terms of quantity (semester hours of credit) and quality

(grades). Grades are assigned according to a letter system with each letter being assigned a grade-point value. The letter grades and grade-point values are as follows:

GRADES Letters and Meaning	Grade-Point Value per Semester credit
A — Superior	4
A — Good	3
C — Average	2
D — Passing	1
F — Failing	0

The notation (#) when following a letter grade means that grade is not computed in the GPA.

The above scale is known as a four-point grading system since four is the highest grade point assigned. The number of grade points earned is computed by multiplying the grade-point value for the letter grade by the number of semester credits for the course. As an example, a student receiving an "A" (i.e., 4 grade points) in a 3-credit course receives 12 grade points.

Grade-Point Average

The grade-point average (GPA) is computed by dividing the number of grade points earned at VCU by the number of credits attempted at VCU. The grades of accepted transfer courses are not included in the computation of the VCU grade-point average.

Repeated Courses

Courses attempted at VCU may be repeated. All credits attempted and grade points earned are included in the computation of the cumulative grade-point average with the following exception: If a student repeats a course in which a "D" or "F" grade was received on the first attempt, the student may request that only the better grade be counted in computing the cumulative grade-point average. However, if more than one "D" or "F" grade is received in the same course, only one of these grades will be removed from the computation of the cumulative grade-point average. **A student must file the repeated course request form by the end of the eighth week of classes in order to have the cumulative grade point average adjusted at the end of the semester.**

The grades for all attempts will be recorded on the student's permanent record. Students may not repeat courses for which they have pre-

viously received transfer credit without losing the transfer credit. A repeated course may be counted only once as credits earned for graduation. Before repeating a course, the student should consult with the advisor or department chairman.

Students who choose to exercise the repeat course option must do *prior* to the awarding of their undergraduate degree.

Grade Exclusion Policy

This policy is applicable for former students who are reentering VCU as students after being completely separated from VCU for five or more years and who meet all of the following eligibility criteria:

1. A student whose previous academic performance at VCU as measured by cumulative grade-point average (GPA) was less than 2.0;
2. A former student who has been engaged in another primary endeavor since separation from VCU; and
3. A student who demonstrates a renewed academic interest and effort by earning at least a 2.0 GPA as a full-time student in the first semester, or the first 12 semester hours completed as a continuing part-time student.

Under the grade exclusion policy, eligible students may request to have D and F grades previously earned at VCU excluded from their total credits earned and GPA computation for the purpose of meeting scholastic continuance and graduation requirements. All earned grades, including excluded D and F grades, however, will remain on the permanent transcripts and will be included in the GPA computation for graduation honors. The courses for which exclusion is sought must be approved by the student's major department chairman and by the dean of the school. The grade exclusion policy may be used only once during a student's enrollment at VCU and cannot be revoked by the student after approval.

Change of Grade

A change of grade which will affect the student's academic eligibility to enroll must be made during the first week of classes of the semester or summer session in which the student wishes to continue attendance.

A final grade which does not affect the student's academic eligibility may be corrected by

the faculty member with proper submission of the Change of Grade Form to the chairman of the department in which the course was taught. The chairman will forward the form to the school's dean who will send it to University Enrollment Services/Records and Registration. For grades awarded for the fall semester, the change of grade must be submitted to the chairman of the department no later than 30 calendar days after the beginning of the following spring semester. For grades awarded for the spring semester or summer sessions, the change must be submitted no later than 30 calendar days after the beginning of the following fall semester.

Grade Review Procedure

If a student feels that a grade is inaccurate, the student should discuss the grade with the faculty member. This will allow the faculty member to explain how the final grade was determined and, if an error is detected, to submit a change of grade.

If no agreement is reached and the student feels that the grade was unfairly assigned, the student may submit a written appeal to the chairman of the department in which the course was taught. For grades awarded for the fall semester, the change of grade appeal must be submitted to the department chairman no later than 30 calendar days after the beginning of the following spring semester; for grades awarded for the spring semester or summer sessions, the written appeal must be submitted no later than 30 calendar days after the beginning of the following fall semester.

The burden of proof is upon the student, and the written appeal should state and support with available evidence the reasons why the student believes the grade should be changed. The chairman of the department shall attempt to mediate an amicable solution within two weeks of receipt of the written appeal. If the complaint is not resolved, the chairman shall forward the student's appeal to the dean of the school in which the course was taught.

The dean shall form a Grade Review Committee comprised of a nonvoting faculty chairman, two faculty members, and two students. The committee will review all written materials and records and will arrange for a hearing unless the appeal is judged to be patently without merit. At the hearing, the committee will hear evidence and testimony from all parties. The committee has the option of either raising the grade or

leaving the grade unchanged.

See also the Grade Review Procedure which is printed in full in the *Directory of Student Services*.

Marks

The marks listed below are not considered in the computation of hours attempted, hours earned, grade points earned, or grade-point average.

Letters and Meaning	Grade-Point Value per Semester credit
AU — Audit	—
I — Incomplete	—
PR — Progress	—
CO — Continued	—
W — Withdrawn	—
CR — Grade assigned for successful completion of credit by examination	—
NG — Temporary administrative grade assigned when no grade is submitted by the instructor	—
NC — Administrative grade, no credit	—
RD — Repeated course; grade of "D" excluded from cumulative grade point average	—
RF — Repeated course; grade of "F" excluded from cumulative grade point average	—

Mark of Audit (AU)

Class size permitting, a student may register for a course on an audit basis. Auditing a course means that a student enrolls in a course but does not receive academic credit. A student who registers on an audit basis is subject to attendance regulations of that class and may receive an administrative withdrawal for non-attendance. A student who registers for audit may be subject to other course requirements at the discretion of the instructor. Audit students are charged the regular rate of tuition and fees, and an audit course is counted as part of the student's semester load.

A change in registration from "Audit" to "Credit" or "Credit" to "Audit" must be effected during the add/drop period. A course taken for audit cannot be changed to credit at a later date.

Mark of Incomplete (Temporary)

When circumstances beyond a student's control prevent the student from meeting requirements of a course by the end of a semester, the student may request, in writing, that the mark of "Incomplete" be given for that semester. If in agreement, the faculty member fills out an "Incomplete Mark Assignment" form, bearing the student's signature with the student's written request attached. This form is then submitted by the faculty member with the grade sheet for that course.

The normal time limit for submission of all course work necessary for removal of an "Incomplete" given during the fall semester is 30 calendar days after the beginning of the following spring semester; for "Incomplete" marks given during the spring semester or summer program, all course work must be submitted within 30 calendar days after the beginning of the following fall semester. The deadline for completion may be extended to the end of that semester upon the student's written request and with the approval of the faculty member and the dean of the school through which the course is offered. Extension beyond the end of the following semester is available only to students not enrolled during the semester in which the deadline falls and upon request submitted prior to the normal deadlines.

Upon expiration of the time limit, an unremoved "Incomplete" is automatically changed to a failing grade.

Mark of Progress (PR)

The mark of "PR" may be assigned only in courses approved for such grading. Unlike the mark of "I," the mark of "PR" will not automatically be changed to a failing grade at the end of the succeeding semester.

Mark of Continued (CO)

The mark of "CO" may be assigned as an interim mark for those courses which run over several grade reporting periods. The "CO" indicates that the course is not expected to be completed in a single semester and that the student must re-register for the course. Upon completion of the course a final grade will be assigned to the current semester and the previous "CO" mark(s) will remain. This mark may be assigned only in courses approved for such grading.

Mark of Withdrawn (W)

The mark of "W" indicates that the student has officially withdrawn from the course or has been withdrawn for non-attendance. The last day to withdraw for the fall and spring semesters is the end of the eighth week of classes. Summer students should check the *Summer Bulletin* for withdrawal dates.

Evaluation and Final Grade Reports

Students are encouraged to discuss progress in courses with their instructors, especially prior to the withdrawal deadline.

Reports showing the final grades of students in their courses are sent at the end of each semester.

Final grade reports are mailed to the official mailing address on file in University Enrollment Services/Records and Registration. Students must submit in writing any change of address to University Enrollment Services/Records and Registration, 901 West Franklin Street, Box 2520, Richmond, VA 23284-0001.

Transcripts

A transcript is a copy of the student's permanent academic record. An official transcript carries the university seal. Unofficial transcripts given directly to students do not carry the university seal.

Transcripts of student academic records are issued by University Enrollment Services/Records and Registration only upon the written request of the student. The request should be made at least one week prior to the date needed.

Transcripts cannot be issued during a two-week period immediately following examinations.

A transcript will not be issued until the student has paid all university bills.

Transcript requests signed by the student may be submitted in person or by mail to University Enrollment Services/Records and Registration, 901 West Franklin Street, Box 2520, Richmond, VA 23284-0001.

CONTINUANCE AT VCU**Definition of Good Standing**

A student who has been admitted to VCU and is currently enrolled is in good standing until such time that he/she is placed on academic suspension.

Academic Warning

A student is placed on academic warning when the cumulative grade-point average falls below 2.0 (or "C") at the conclusion of any term of attendance (fall, spring, or summer). Such notification will appear on the student's grade report. A student remains on academic warning for one term (fall, spring, summer) of attendance at the end of which time the student must obtain a cumulative grade-point average of at least 2.0. Failure to do so results in academic probation.

Academic Probation

A student is placed on academic probation when the cumulative grade-point average is below 2.0 (or "C") for two successive terms of attendance. Such notification will appear on the student's grade report. A student on academic probation may not enroll for more than 12 credits per term of attendance. Students on academic probation are expected to improve their cumulative grade-point average by achieving a semester grade-point average of 2.0 or better during each term of attendance (fall, spring, and summer). Failure to do so results in academic suspension. A student will be removed from academic probation when a cumulative grade-point average of at least 2.0 is obtained.

Academic Suspension

A student is placed on academic suspension when the cumulative grade-point average is below 2.0 for two successive semesters and the following semester grade-point average is below a 2.0. Notification of suspension will appear on the student's grade report and the student also will receive a certified letter from University Enrollment Services/Records and Registration stating the conditions of the suspension. A notation of the suspension is placed on the student's permanent record. Academic suspension indicates that the student has a record of continued unsatisfactory progress.

A student on academic suspension may not enroll at the university for two consecutive semesters, including summer (fall and spring, spring and summer, or summer and fall). Course work taken at another institution while the student is under academic suspension from VCU will be considered as part of the criteria for readmission, but the course work may not be used to increase the VCU grade-point average. If the student is readmitted, the course work will be evaluated according to regular procedures.

A student may apply for readmission to VCU for the semester following completion of the suspension period. A student readmitted after suspension enrolls under the status of academic probation and is subject to the provisions of that status. If a student readmitted after suspension fails to obtain a semester grade-point average of 2.0 in any term before achieving a cumulative grade-point average of at least 2.0, the student will receive a second, and final, suspension. Under certain circumstances, the student may be considered for readmission after a period of separation of a minimum of five calendar years.

For readmission guidelines, see Part II of this bulletin.

HONORS

Dean's List

The dean's list is a recognition of superior academic performance. A student is placed on the dean's list for each semester in which a semester grade-point average of 3.5 or higher is earned, based on a minimum of 15 credits earned. A notation is placed on the student's permanent academic record. Students with marks of "Incomplete" or "Progress" are not eligible for the dean's list.

Graduation Honors

Candidates for a baccalaureate degree who have completed a minimum of 60 credits at this institution may qualify for graduation honors. Honors are based on the cumulative grade-point average for all credits attempted at VCU at the time of graduation. Cum Laude is awarded for 3.3 to 3.59; Magna Cum Laude is awarded for 3.6 to 3.89, and Summa Cum Laude is awarded for 3.9 and above.

Recognition of the graduation honors will be made on the student's diploma, permanent record, and in the commencement bulletin.

Honors for Transfer Students

Transfer students, in order to qualify for graduation honors for the baccalaureate degree, are required to complete a minimum of 60 credits at this institution with a minimum scholastic average at VCU of 3.3 to 3.59 for cum laude, 3.6 to 3.89 for magna cum laude, and 3.9 for summa cum laude supported by equivalent performance on all credits attempted elsewhere. Transfer credit graded as "pass/fail" will not be included

in the computation for determination of honors at VCU.

Recognition of graduation honors will be made on the student's diploma and permanent record.

DEGREE REQUIREMENTS FOR ALL ACADEMIC CAMPUS STUDENTS

Listed below are the degree requirements which must be fulfilled by all degree-seeking students on the Academic Campus. The student must consult the school and major departmental sections of this bulletin for additional degree requirements.

Grade-Point Average

A cumulative grade-point average (GPA) of 2.0 ("C" average) or better is required in order to receive a baccalaureate degree. (Only credits taken at VCU are computed in the GPA).

Total Credits

The total number of semester credits required for graduation depends upon the student's major. Specific information may be found under the degree program descriptions beginning with Part VI of this bulletin.

Major Concentration:

A cumulative grade-point average (GPA) of 2.0 ("C" average) or better is required in all major courses in order to receive the baccalaureate degree. (Only credits taken at VCU are computed in the GPA). Students should consult the section of the bulletin which deals with their major for any grade-point average requirements above the university minimum of 2.0.

Upper-Level Courses

A minimum of 45 credits is required in 300-400- and 500-level courses for a bachelor's degree. Credits transferred from two-year institutions may not be used to fulfill this requirement.

Last 30 Credits

Degree candidates are required to complete the last 30 credits at this institution for either an *associate* or *bachelor's* degree.

Graduation Application

The university confers degrees in May, August, and December; however, it holds an annual

commencement exercise only in May. Each student who expects to complete the degree requirements by the end of a semester or summer session is required to file an application for the degree. Application forms may be obtained from University Enrollment Services/Records and Registration.

Degree applications must be submitted no later than the dates indicated in the calendars appearing in the front of this bulletin. A student should schedule a conference with the advisor well ahead of the deadline and should note that the application requires, in addition, the approval of the department chairman and dean.

DEGREE OPTIONS

Second Baccalaureate Degree

A student who wishes to earn a second baccalaureate degree at the university should complete an application for admission indicating that the application is for a second baccalaureate degree. This form may be obtained from University Enrollment Services/Admissions and should be returned to that office. Upon receipt of the student's previous academic record, University Enrollment Services will notify the student to confer with the appropriate assistant dean. After a review by the assistant dean and the department chairman, the school's decision will be forwarded to University Enrollment Services/Admissions, which will notify the student of the decision.

The student seeking the second undergraduate degree must earn a minimum of 30 additional semester credits at VCU and must also satisfy any supplementary requirements of the department or school granting the degree.

Double Major

A double major is the fulfillment of the requirements in two majors concurrently. To earn a degree in double majors, the student must fulfill all of the requirements of the degree program(s) of which the majors are a part. Only one diploma will be awarded but a notation recognizing the completion of the second major will be posted on the student's permanent academic record. To initiate a double major, the student must obtain the appropriate form in University Enrollment Services/Records and Registration.

Minor Areas of Concentration

Although a minor is not required for completion of a degree, a student may elect any approved minor area of concentration. A minor is the completion within an area of specialization of a group of courses which is usually less than that required for a major. The minor may be used to fulfill career needs or to facilitate in-depth investigation in a discipline of secondary interest.

The student should discuss intentions to pursue a minor with his/her advisor. The courses for the minor shall be chosen from those courses approved for the minor. A notation recognizing the fulfillment of the requirements for a minor will be posted on the student's permanent academic record at the time of graduation. When the student submits an application for graduation, he/she should also submit a Minor Application form.

OTHER SOURCES OF ACADEMIC CREDIT

College Level Examination Program (CLEP)

The College-Level Examination Program (CLEP) is designed to allow individuals who have gained knowledge outside the classroom to take an examination and receive college credit for what they have learned.

Persons interested in taking the CLEP examination who are special students should direct their inquiries to the Office of Student Services, School of Education, Virginia Commonwealth University, 901 West Franklin Street, Box 2020, Richmond, VA 23284-0001, (804) 257-1296.

Procedures for VCU Students

1. Obtain the CLEP Approval Forms, information about the CLEP general and/or subject examinations, VCU course equivalency information, optional essay requirements, and the CLEP examination application from the Office of Student Services, School of Education, Box 2020, 901 West Franklin Street, Virginia Commonwealth University, Richmond, VA 23284-0001, (804) 257-1296.
2. Three CLEP Approval Forms must be completed for general examinations and for each subject examination taken.
3. Discuss the examination(s) to be taken with an advisor. Obtain permission signatures of advisor and assistant dean of the

school in which the student is a major on each of the three approval forms. If the optional essay is required for a subject examination, it should be indicated on the CLEP Approval Forms and on the CLEP application.

4. Return the completed CLEP Approval Forms, the completed CLEP application, and the proper fee to the Office of Student Services. Upon receipt of these materials and fees, the examination time will be scheduled.
5. When the examination score is received, and the optional essay is corrected, if required (a minimum of four weeks should be allowed), it will be forwarded to the dean's office in which the student is a major for final action. The dean will send formal notification of the award of credit to the student, University Enrollment Services, and the student's advisor.

Regulations for VCU Students

1. CLEP credit is officially awarded only to students who are fully accepted into a VCU degree program.
2. Students may not take a subject or general examination in the semester in which they plan to graduate.
3. A student may not attempt a subject or general examination if it duplicates in part, or all, any VCU course or combination of courses which the student has already completed or enrolled in for credit. (For example, a student who has completed courses in United States and European history, sociology, anthropology, and psychology, or similar courses, would not be eligible to take the social sciences and history general examination. The dean's office of the school in which the student is a major will make the decision about the appropriateness of taking a particular general examination.)
4. If a student has earned CLEP subject examination credit, the student may not take a VCU course for credit which would duplicate the already earned CLEP credit.
5. The CLEP general examination in English composition is not acceptable for VCU credit. Students may take the CLEP freshman English subject examination for credit equivalent to English 101-102. For a student to receive credit for the CLEP

general examination in mathematics, the student must take the Mathematics Placement Test and obtain the following result for credit to be awarded: the student must test at the MAT 102, 112, 200, or STA 213 level. Contact the Department of Mathematical Sciences (804) 257-1320 to make arrangements to take the test. The results should be reported to the dean of the school in which the student is a major.

6. The maximum number of semester credits that may be earned through CLEP Examinations is 54.

Undergraduate Credit by Examination

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the University provides its students the opportunity to accelerate their education through "credit-by-examination." The conditions under which credit-by-examination may be given and the procedure for doing so are outlined below.

1. Each department or program, with the approval of the dean, shall
 - A. Determine which, if any, courses shall be available for credit-by-examination. The student should check with the department offering course work in the area in which he or she wishes to take credit-by-examination for a list of the courses so designated.
 - B. Determine the types of examinations, standards of evaluation, and evaluators for the courses so designated; and
 - C. Determine the qualifications for students to be eligible to take the examinations.
2. The examinations, if available, may be taken during the fall and spring semesters and during the summer program by any enrolled student.
3. The student wishing to take credit-by-examination must
 - A. Not have received a grade listed in the bulletin including "AU" or "W" for the course for which credit-by-examination is being sought. Nor should the student have been granted transfer credit for a similar course taken elsewhere.
 - B. Be a currently enrolled student as certified by the examining department.
 - C. Meet departmental and school eligi-

bility requirements as evidenced by the written approval of the chairman of the examining department.

4. After consultation with his major advisor and within the first four weeks of a semester (or first week of a summer program), the student must complete the credit-by-examination approval form (obtained in the department) with the department chairman, leaving the completed form with the department chairman.
5. Within two weeks, the student will be notified by the dean's office of the department handling the examination of the place and time of the examination.
6. After notification by the dean's office and before taking the examination the student shall pay the university cashier the fee established by the university for each credit being sought. The student shall present the receipt for payment to the department chairman prior to the time designated for taking the examination to verify payment.
7. After the examination has been taken, the results and the examination will be forwarded to the dean's office, which will notify the student of the results. If the examination is passed, the course title, credits earned, and the grade of "CR" shall be recorded on the student's permanent record. The credits so earned will be applied toward the graduation requirement for total credits, but will not be included in the calculation of the student's grade-point average.

Military Service and ROTC Courses

The university may grant credit for formal military service school courses offered by the various branches of the United States Armed Services. The guidelines for granting credit for such courses include:

1. the positive recommendation of the Commission on Accreditation of Service Experiences of the American Council on Education as stated in the most recent edition of "A Guide to the Evaluation of Educational Experiences in the Armed Services," and,
2. the applicability of such credit to the student's degree program as interpreted by the department or the school in which the student seeks a degree. Accepted credits

are counted as credits earned toward the degree, but not used in the computation of the student's VCU grade-point average. The student should consult with the assistant dean of the school or college for further details about the procedures for awarding credit for military service school courses.

Army ROTC is offered to all students at VCU. Advanced standing may be granted to veterans, junior ROTC graduates, or members of the Reserves/National Guard after review of academic records and verification of ROTC academic alignment by the department chairman. The number of credits accepted towards graduation requirements is determined by each school.

Transfer Credit

Refer to Evaluation of Transfer Credit in Part II of this bulletin.

ACADEMIC STATUS COMMITTEE

The Academic Status Committee considers petitions for waiver of the academic regulations presented in this section. A student desiring to appeal an academic regulation should contact his advisor, department chairman, academic dean, or the University Advising Center.

MCV HONOR CODE

All students enrolled in courses on the MCV Campus are subject to the Honor System of the MCV Campus, and as such, are required to sign an Honor Pledge Card. Copies of the Honor Code and Pledge Cards are available in the Office of Records and Registration in Sanger Hall.

Academic Programs

INTRODUCTION

The following seven sections describe in detail the undergraduate degree programs offered by VCU. The information which is included in this introduction will help the reader use program and course information found in the following seven sections.

UNDERGRADUATE DEGREE PROGRAMS AND POST-BACCALAUREATE CERTIFICATES

Bachelor of Arts Degrees:

Art History
Chemistry
English
Foreign Languages/French
Foreign Languages/German
Foreign Languages/Spanish
Foreign Languages/Comparative Literature
History
Philosophy
Political Science
Psychology
Religious Studies
Sociology and Anthropology

Bachelor of Fine Arts Degrees:

Art Education
Art History
Communication Arts and Design
Crafts
Dance/Choreography
Fashion
Interior Design
Painting and Printmaking
Sculpture
Theatre
Theatre Education

Bachelor of General Studies

Bachelor of Music Degrees:

Applied Music
Composition and Theory

Bachelor of Music Education Degree

Bachelor of Science Degrees:

Accounting
Administration of Justice and Public Safety
Biology
Business Administration and Management
Business Education
Chemistry
Clinical Radiation Sciences
Dental Hygiene
Economics
Elementary Education
Early Education NK-4
Middle Education 4-8
Health Care Management
Information Systems
Marketing
Mass Communications
Mathematical Sciences/Applied Mathematics
Mathematical Sciences/Computer Science
Mathematical Sciences/Mathematics
Mathematical Sciences/Operations Research
Mathematical Sciences/Statistics
Medical Record Administration
Medical Technology
Nursing
Occupational Education
Occupational Therapy
Office Administration
Pharmacy
Physical Therapy
Physics
Physics/Engineering (dual degree)
Physical Education
Psychology
Public Safety
Recreation
Rehabilitation Services
Secondary Education
Biology
Chemistry
English
French
General Science
German
Health Education
History and Social Science
Mathematics
Physics
Spanish

Sociology and Anthropology
 Special Education
 Behavior Disorders
 Learning Disabilities
 Mental Retardation
 Severe/Profound Handicaps
 Urban Studies and Planning

Bachelor of Social Work Degree

Post-Baccalaureate Certificates:

Accounting
 Administration of Justice and Public Safety
 Computer Science
 Information Systems
 Montessori Education
 Public Administration

GENERAL COURSE INFORMATION

Course Numbering System

1. All course numbers will consist of three digits (XXX).
2. The first digit relates to the course level as follows:
 - a. 0XX Noncredit Courses
 - b. 1XX Undergraduate, Lower Level
2XX
 - c. 3XX Undergraduate, Upper Level
4XX
 - d. 5XX Introductory Graduate Courses
(Medicine and Dentistry)
Fifth Year Professional Baccalaureate (Pharmacy)
 - e. 6XX Graduate Courses
7XX
6XX Second Year, First Professional
(Medicine, Dentistry, Pharmacy)
7XX Third and Fourth Year, First
Professional (Medicine and Dentistry)

Course Interpretation

A single number listing for a course, such as Business 121, indicates that it is a one-semester course or is given only one semester each year.

Courses listed with a double number, such as History 201, 202 and designated as semester courses, consist of two one-semester courses, either semester of which may be taken without the other.

Courses listed with a double number, such as English 101-102 and designated as a continuous course, consist of two one-semester courses, the first of which can be taken without the second, but the second of which cannot be taken without the successful completion of the first.

The university reserves the right to withdraw any course or program.

Humanities Courses

To fulfill electives in the humanities, students generally may choose courses from among the following:

Art History—all courses except those primarily concerned with technique, style, or skill (e.g., ARH 260, 261 History of Painting Technology; ARH 360 Introduction to Conservation);

English—excluding courses in writing;

Foreign Languages—courses at intermediate (201) level and above, except when such courses are used to fulfill the general education requirement in foreign languages;

History—only HIS 305, 307, 308, 309, 336, 337, 338, 365, 366, and 485;

Music—only MHT 243, 244, 421-422, and 441;

Philosophy—all except PHI 221, 222;

Political Science—only POS 341 and 342;

Religious Studies—all courses;

Any of the courses in European Cultures (EUC), and Foreign Literature in Translation (FLT).

Course Abbreviations Used in This Bulletin

Abbrev.	Description
AAS	Afro-American Studies
AEN	Art Education
AFO	Art Foundation
AHP	Allied Health Professions
AJP	Administration of Justice and Public Safety
AMS	American Studies
ANA	Anatomy
ANT	Anthropology
APM	Applied Music
ARH	Art History
ART	Art
BIC	Biochemistry
BIO	Biology
BUS	Business
CDE	Communication Arts and Design
CHE	Chemistry
CHI	Chinese
CHM	Church Music
CHS	College of Humanities and Sciences
CML	Comparative Literature
COP	Cooperative Education
CRA	Crafts
CRS	Clinical Radiation Sciences
CSC	Computer Science
CSE	Community Services
DAN	Dance
DEH	Dental Hygiene
EAS	Earth Science
ECO	Economics

54 Academic Programs

EDU	Education
ENG	English
ENS	Environmental Studies
EUC	European Cultures
FDE	Fashion
FLT	Foreign Literature in English Translation
FRE	French
GEO	Geography
GER	German
GTU	Gerontology
HCM	Health Care Management
HED	Health Education
HIS	History
HON	Honors
IDE	Interior Design
INT	International Studies
ITA	Italian
JAP	Japanese
LAT	Latin
LIN	Linguistics
LSK	Language Skills
MAC	School of Mass Communications
MAT	Mathematics
MER	Medical Record Administration
MET	Medical Technology
MHT	Music History, Literature, and Theory
MIC	Microbiology
MIS	Military Science
MUC	Music Composition
MUE	Music Education
NUR	Nursing
OCT	Occupational Therapy
OED	Occupational Education
PAC	Patient Counseling
PAP	Painting and Printmaking
PAT	Pathology
PHA	Pharmacy
PHC	Medicinal Chemistry
PHE	Physical Education
PHI	Philosophy
PHT	Physical Therapy
PHY	Physics
PIO	Physiology and Biophysics
PMC	Pharmacology
POS	Political Science
PSY	Psychology
PTY	Photography
REC	Recreation
RED	Restorative Dentistry
REH	Rehabilitation Counseling
RST	Religious Studies
RTE	Radiologic Technology
RUS	Russian
SCU	Sculpture
SLW	Social Work
SOC	Sociology
SPA	Spanish
SPE	Speech
SSC	Social Science
STA	Statistics
THE	Theatre
USP	Urban Studies and Planning

SCHOOL AND PROGRAM ACCREDITATIONS

School of Allied Health Professions: American Society of Allied Health Professions, Virginia Associations of Allied Health Professions

School of the Arts: National Association of Schools of Art and Design

School of Business: American Assembly of Collegiate Schools of Business (Undergraduate and Masters)

School of Education: Virginia State Department of Education; National Council of Accreditation for Teacher Education (NCATE)

School of Mass Communications: American Council on Education for Journalism accreditation for the news-editorial and broadcast-news sequences

School of Nursing: National League for Nursing Department of Baccalaureate and Higher Degree Programs

School of Pharmacy: American Council on Pharmaceutical Education, American Association of Colleges of Pharmacy

School of Social Work: Commission on Accreditation of the Council on Social Work Education (B.S.W. and M.S.W.)

Department of Administration of Justice and Public Safety: Criminal Justice Accreditation Council

Department of Chemistry: The American Chemical Society

Department of Interior Design: Foundation for Interior Design Education Research

Department of Music: National Association of Schools of Music

Department of Psychology: American Psychological Association accreditation of the Clinical and Counseling Psychology Ph.D. programs

Department of Recreation, Parks, and Tourism: National Council on Accreditation of the National Recreation and Parks Association

Program in Dental Hygiene: Commission on Accreditation of the American Dental Association

Program in Medical Record Administration: Committee on Allied Health Education and Accreditation, American Medical Association, in collaboration with the American Medical Record Association

Program in Medical Technology: Committee on Allied Health Education and Accreditation of the American Medical Association

Program in Occupational Therapy: American

Occupational Therapy Association and the
Committee on Allied Health Education and
Accreditation, American Medical Association

Program in Physical Therapy: American Physi-

cal Therapy Association
Program in Radiation Sciences: Committee on
Allied Health Education and Accreditation,
American Medical Association



Qualified undergraduate students in the College of Humanities and Sciences work closely through independent study projects with faculty conducting research.

PART VI—College of Humanities and Sciences

ELSKE v.P. SMITH

Dean of the College

WILLIAM A. GLYNN

Associate Dean

JOHN H. BORGARD

Assistant Dean

DAVID W. HARTMAN

Assistant Dean

LYNN S. BRYANT

Coordinator of Undergraduate Advising

ARTHUR J. SEIDENBERG

Coordinator of Pre-Health Sciences

Advising

School of Mass Communications

GEORGE T. CRUTCHFIELD

Director

Cooperative Graduate Engineering Program

THOMAS W. HAAS

Director

MISSION OF THE COLLEGE

The College of Humanities and Sciences is dedicated to the achievement of excellence through its teaching, research, and public service programs. Distinction achieved by these academic activities will stem from the subject matter of the humanities, letters, and sciences as well as from the creative interaction of faculty with students, with each other, and with the community. To take full advantage of its location and to meet VCU's established and ongoing urban commitment, the College of Humanities and Sciences recognizes and strives to meet the challenges posed by

- a) The diversity of the student body

- b) The diversity of the community

- 1) As a focus for research

- 2) For training and education opportunities

- 3) For service

- c) The diversity of VCU's schools and faculties.

The College of Humanities and Sciences carries the central responsibility for instruction and research in the basic components of all education: the humanities, sciences, and social sciences. In addition, the school offers the preparatory programs for entry into medical, dental, veterinary, law, pharmacy, and nursing schools, and allied health profession programs.

All curricula within the College of Humanities and Sciences are calculated not only to build competence in a specific major area, but also to expose the student to a breadth of interest areas. In addition, the student has the opportunity to learn a variety of other competencies such as research techniques, report writing, observation methods, and interpersonal skills that will apply to a wide range of employment or advanced educational possibilities upon graduation. Students are encouraged to select minors or other groupings of courses in the College of Humanities and Sciences or other schools on the Academic Campus that will add to the student's general knowledge and marketable skills. Finally, the total humanities and sciences program provides a foundation of understanding, knowl-

edge, and skills on which to build for careers, for continued learning in the future, and for the student's involvement as an active citizen in whatever community he or she chooses to reside.

CURRICULA

Undergraduate Degree Programs

The College of Humanities and Sciences offers baccalaureate degrees in 16 areas:

- biology — B.S.
- chemistry — B.S., B.A.
- economics — B.S.
- English — B.A.
- foreign languages — B.A.
- comparative literature
- French
- German
- Spanish
- history — B.A.
- mathematical sciences — B.S.
- applied mathematics
- computer science
- computing science
- mathematics
- operations research
- statistics
- philosophy — B.A.
- political science — B.A.
- physics — B.S.
- physics/engineering (dual degree program) — B.S.
- psychology — B.S., B.A.
- religious studies — B.A.
- sociology and anthropology — B.S., B.A.

The School of Mass Communications offers the Bachelor of Science degree.

Information concerning curricula is given in the respective departmental and school sections.

Minor Areas of Concentration

In addition to the major, a student may elect a minor area of concentration in any department or program offering a minor program. The minor may be used to fulfill career needs or to investigate in depth a discipline of secondary interest.

The student should discuss his intention to pursue a minor with his advisor or the chairman of the major department. The student formally declares a minor by completing the Minor Application obtained along with the Graduation Application when the student files for graduation. The courses for the minor should be chosen from those courses approved by departments offering minors in their areas. Under ordinary circumstances students may not minor in the same area as their major.

A minimum of 18 credit hours is required for designation on the transcript as a minor, and a

minimum grade-point average of 2.0 must be achieved in the minor. Prerequisites for courses remain in effect as stated in the bulletin.

Minors are offered in the following areas; consult the departmental section of this part of the bulletin for a description of each minor.

- Afro-American studies
- American studies
- anthropology
- biology
- chemistry
- computer science
- economics
- electronic instrumentation
- English
- environmental studies
- French
- geography
- German
- history
- international affairs
- Judaic studies
- mathematics
- philosophy
- philosophy of law
- physics
- political science
- public management*
- psychology
- religious studies
- sociology
- Spanish
- statistics
- writing (see English)

*Not open to political science majors.

Preparation for Professional Studies

In addition to its mission of providing studies in liberal arts at the undergraduate and graduate levels, the College of Humanities and Sciences offers undergraduate preparatory programs and advising for the following areas:

- pre-dental hygiene
- pre-dentistry
- pre-engineering
- pre-law
- pre-medical record administration
- pre-medicine
- pre-nuclear medicine technology
- pre-nursing
- pre-occupational therapy
- pre-pharmacy
- pre-physical therapy
- pre-veterinary medicine

Specific curricular descriptions are listed elsewhere in this section.

Graduate Studies

Master's degree programs are offered in biology, chemistry, creative writing, English/

English education, mass communications, mathematical sciences, physics/applied physics, psychology, and sociology. Doctoral programs are available in chemistry and psychology. Students may also find the doctoral programs in social policy and social work (School of Social Work) and urban services (School of Education) of interest. For details about these graduate programs see the *VCU Graduate Bulletin*.

STUDENT ADVISING

An integral part of the program in the College of Humanities and Sciences is individual student advising. The faculty advisor is an important personal link in the university organization. The advisor helps the student establish a relationship between the student's special needs and the university services, assists the student in career selection, and helps the student to understand university procedures.

Each freshman, transfer student, and readmitted student is assigned a faculty advisor by the department in which the student intends to major. Students admitted in the "undecided" category will be assigned advisors by the assistant dean.

Through consultation with the advisor and/or the dean, and frequent references to this bulletin, the student has the responsibility to make certain that the course selections satisfy graduation requirements set forth in the departmental major program, in the general requirements of the College of Humanities and Sciences, and in the general degree requirements of the Academic Campus.

The student has the responsibility to be familiar with the academic regulations of the Academic Campus concerning change of major, continuance, etc., as expressed in Part V of this bulletin.

Career Advising

As a part of the advising process, faculty members provide information about careers and graduate study in their disciplines. In addition, a faculty member in each department has been designated as departmental career advisor and is equipped to assist a student in particular aspects of career development.

EDUCATIONAL GOALS

The ultimate goal of a liberal education is to help students develop the abilities to think and to

continue learning—qualities that will support them in a world dominated by change and in their future endeavors as they become engaged with unsolved problems, whether in their personal lives, on the job, or in the larger community. Students who graduate from the College of Humanities and Sciences should be broadly educated, not simply trained. Thus, they may expect to function as understanding participants in events rather than as spectators or perhaps victims of those events.

To achieve these ends, the faculty of the College of Humanities and Sciences specify the following goals:

Students should write well enough to organize their ideas, support them, and communicate them effectively throughout their careers.

They should be able to reason logically and to quantify experience.

They should have some knowledge of the fundamental ideas and methods of the natural sciences.

Students should be able to analyze ethical conflicts, wherever these occur.

They should have an understanding of literature and of artistic experience.

Students should have a knowledge of our heritage as well as other cultures, including an introduction to a foreign language.

They should have some knowledge of human behavior and social, political, and cultural institutions.

GRADUATION REQUIREMENTS

For students majoring in a four-year B.A. or B.S. degree program (including students in the pre-dental, pre-medical, and pre-veterinary classifications), there are three areas of requirements which the student must complete for graduation:

1. Academic Campus requirements (See Part V of this bulletin)
2. General education requirements of the College of Humanities and Sciences
 - A. Bachelor of Arts degree or
 - B. Bachelor of Science degree
3. Departmental major requirements

General Education Requirements of the College of Humanities and Sciences

In the following paragraphs, specific courses which fulfill the general education requirements will be indicated. In other cases, reference will be made to approved lists from which students

must choose courses to complete particular requirements. Specific courses recommended by a department to fulfill one or more of the College of Humanities and Sciences general education requirements are listed under Degree Requirements in the departmental section. Students should check these listings.

Major or minor courses may fulfill general education requirements if those courses appear among the following general education requirements or on the Approved Lists. However, no one course can be used to fulfill two general education requirements, with the exception of courses used to meet the writing-intensive requirements.

All Bachelor of Arts and Bachelor of Science degree programs require students to complete a minimum of 124 credits, no more than four of which may be physical education/activity courses.

Continuing students who entered the College of Humanities and Sciences prior to fall 1982 have the option of satisfying the new requirements listed below OR those in effect prior to fall 1982, when they entered or reentered the university.

Bachelor of Arts

The general education requirements listed below apply to the B.A. degree program in these areas: **chemistry, comparative literature, English, French, German, history, philosophy, political science, psychology, religious studies, sociology and anthropology, and Spanish.**

Minimum Competencies

Credits

1. A. ENG 101-102 Composition and Rhetoric (by placement or course with a minimum grade of C in each course) 6-9¹

All students who have not received credit for first semester freshman composition and rhetoric must take the English Placement Test. On the basis of the scores, students will be placed in the appropriate level of English or exempted and given credit for the course.

- B. One upper level (300-400) course in expository writing. (See Approved List A.)

OR

Writing-Intensive Courses—two designated courses other than those on Approved List A which require substantial writing. (See

Schedule of Classes book each semester for a listing of these courses.)

The process of writing takes place in all disciplines. Specific sections of courses will be designated in a variety of departments which will provide students with opportunities for substantial writing while at the same time completing a major course or elective.

2. A. PHI 221 Critical Thinking

6-9

AND

either MAT 101 College Algebra or MAT 111 Basic Mathematics of the Behavioral, Social, and Management Sciences.

- B. Three additional credits from CSC 150 BASIC Computer Concepts, CSC 201 Introduction to Computing, CSC 255 Structured Programming, MAT 102 Trigonometry, MAT 112 Elements of Calculus for Behavioral, Social, and Management Sciences, MAT 200 Calculus with Analytic Geometry, MAT 211 Mathematical Structures, PHI 222 Formal Logic, STA 213 Introduction to Statistics

If the student places beyond the 101 (111) level on the Mathematics Placement Test, the student may complete the mathematics part of Section A, and the section B requirement by completing any course in B EXCEPT CSC 150 and PHI 222. If the student places into and completes MAT 101 or 111 or the CACE, ANY course in B may be taken to fulfill the section B requirement.

All students who have not started or completed the mathematics sequence indicated in their curriculum must take the Mathematics Placement Tests.

College Algebra Competency Examination—The College Algebra Competency Examination (CACE) is designed to allow individuals to demonstrate competency in college algebra in order to fulfill a portion of the general education requirements for the Bachelor of Arts degree, specifically the requirement listed under the Bachelor of Arts, Minimum Competencies, Part 2., A.

The CACE is to be used in lieu of taking a mathematical sciences course at the college algebra level or higher. No academic credit is earned through the CACE.

Persons who have placed at a level higher than college algebra (MAT 101) on the Mathematics Placement Test are eligible to take the CACE. Inquiries about times and procedure for taking the CACE should be addressed to the Department of Mathematical Sciences, Oliver Hall, 1015 West Main Street, Richmond, VA 23284-0001, (804) 257-1301.

The CACE is not the same as the Mathematics Placement Test.

Natural Sciences

Two-semester sequence of an introductory laboratory science (by course or placement) to be

8-10

¹This figure assumes that the requirement is met through an upper-level (300-400) expository writing course. (See Approved List A.) If it is met through writing-intensive courses, presumably they will be used to meet other general education requirements or part of the major.

chosen from BIO 101-102, L101/102 General Biology and Laboratory; CHE 101-102, L101/102, General Chemistry and Laboratory; CHE 103-104, L103/104 Introduction to Modern Chemistry and Laboratory; PHY 101-102, L101/102 Foundations and Frontiers of Physics and Laboratory; PHY 201-202 General Physics and Laboratory; PHY 207, 208 University Physics and Laboratory.

Check the *VCU Undergraduate Bulletin* for prerequisites for science courses.

Human Nature, Culture, and Institutions

1. Three credits in non-participatory courses in the history of an art, art criticism, aesthetics, or music appreciation (See Approved List G.) 2-3
OR
 Two or more credits in participatory arts course (See Approved List G.)
2. Three credits from courses that apply ethical theories to fundamental moral problems (See Approved List H.) 3
3. Two courses in literature in English or foreign literature in English translation or upper-level (300-400) foreign literature in the original language. **One of the two courses must be in literature prior to 1900.** (See Approved List B.) 6
4. Two of the following three options: 12
 A. A two-semester 100- or 300-level European history sequence (See Approved List C.)
OR
 Six credits in European culture and heritage courses (See Approved List E.)
 B. A two-semester 100-300-level American history sequence (See Approved List D.)
 C. Six credits in non-western culture and heritage courses (See Approved List F.)
5. A foreign language through the intermediate 202, 205, or equivalent level (by course or placement.) 0-14
 A. Freshmen who wish to continue in their high school language will be given a placement test to determine the level at which they will begin language study for credit. Students desiring to begin study of a different language need not take the placement test and may begin with the elementary course in that language for credit.
 B. Students transferring from other colleges and universities with advanced placement or advanced standing in foreign language will receive credits as granted by the institution from which they are transferring and should register for the next course in the sequence. Transfer students who have not begun language study at the collegiate level and who wish to continue study of their high school language are subject to the provisions of the previous paragraph.
 C. New freshmen and transfer students who qualify through the intermediate level (course 202 or equivalent) of a foreign language on the placement test receive no semester credit for such placement but have satisfied the language requirement.
6. Two courses that focus on human behavior and institutions (See Approved List J.) 6

Major

See major department degree requirements for exact number of credits (30 credit minimum.)

Approved Electives

Approved elective courses to bring credit total to a minimum of 124 credits. Students should consult with their advisors about choice of minor program courses and/or electives appropriate to their departmental programs and personal interests.

Bachelor of Science

The general education requirements listed below apply to the B.S. degree programs in these areas: **biology, chemistry, economics, mass communications, mathematical sciences, physics, physics/engineering, psychology, and sociology and anthropology.**

Minimum Competencies

Credits

1. A. ENG 101-102 Composition and Rhetoric (by placement or course with a minimum grade of C in each course.) 6-9'

All students who have not received credit for first semester freshman composition and rhetoric must take the English Placement Test. On the basis of the scores, students will be placed in the appropriate level of English or exempted and given credit for the course.

- B. One upper-level (300-400) course in expository writing (See Approved List A.)

OR

Writing-Intensive courses—Two designated courses other than those on Approved List A which require substantial writing (See Schedule of Classes book each semester for a listing of these courses.)

The process of writing takes place in all disciplines. Specific sections of courses will be designated in a variety of departments which will provide students with opportunities for substantial writing while at the same time completing a major course or elective.

2. MAT 101 College Algebra or MAT 111 Basic Mathematics for the Behavioral, Social and Management Sciences (by course or placement.) 6-9

AND

Six additional credits from the mathematical sciences—computer science, mathematics, or statistics—as stipulated by the major departments.

Natural Sciences

- Two-semester sequence of an introductory laboratory science as stipulated by the major department (by course or placement) to be chosen from BIO 101-102, L101-102 General Biology and 8-10

'This figure assumes that the requirement is met through an upper-level (300-400) expository writing course (See Approved List A.) If it is met through writing-intensive courses, presumably they will be used to meet other General Education requirements or will be part of the major.

Laboratory; CHE 101-102, L101-102 General Chemistry and Laboratory; CHE 103-104, L103-104 Introduction to Modern Chemistry and Laboratory; PHY 101-102, L101-102 Foundations and Frontiers of Physics and Laboratory; PHY 201-202 General Physics and Laboratory; PHY 207, 208 University Physics and Laboratory.

Check the *VCU Undergraduate Bulletin* for prerequisites for science courses.

Human Nature, Culture, and Institutions

1. Civilization and Culture. Minimum of 14 credits from categories A, B, C, and D below to be taken as follows: no more than six credits in each category may be used toward the required 14, and, of these, six credits must be taken from category A **OR** six must be taken from category B. (Courses can still be taken in both categories.) If the six credits are taken from category A and not from B, three credits must be in literature prior to 1900.
 - A. Literature—courses in literature in English or foreign literature in English translation or upper-level (300-400) foreign literature in the original language. **One of the two courses must be in a literature prior to 1900.** (See Approved List B.)
 - B. History or Culture and Heritage European history courses (See Approved List C.)

OR

 American history courses (See Approved List D.)

OR

 European Culture and Heritage courses (See Approved List E.)

OR

 Non-Western Culture and Heritage courses (See Approved List F.)
 - C. Three credits in nonparticipatory courses in the history of an art, art criticism, aesthetics, or music appreciation; (See Approved List G.)

OR

 Two or more credits in participatory arts courses (See Approved List G.)
 - D. Ethics—courses which apply ethical theories to fundamental moral problems (See Approved List H.)
2. A foreign language through the elementary 102 or equivalent level (by course or placement.)
 - A. Freshmen who wish to continue in their high school language will be given a placement test to determine the level at which they will begin language study for credit. Students desiring to begin study of a different language need not take the placement test and may begin with the elementary course in that language for credit.
 - B. Students transferring from other colleges and universities with advanced placement or advanced standing in foreign language will receive credits as granted by the institution from which they are transferring and should register for the next course in the sequence.

Transfer students who have not begun language study at the collegiate level and who wish to continue study of their high school language are subject to the provisions of the previous paragraph.

- C. New freshmen and transfer students who qualify through the elementary level (course 102) of a foreign language on the placement test receive no semester credit but have satisfied the language requirement.
3. Two courses that focus on human behavior and institutions (See Approved List J.)

Major

See major department degree requirements for exact number of credits (30 credit minimum.)

Approved Electives

Approved elective courses to bring credit total to a minimum of 124 credits. Students should consult with their advisors about choice of minor program courses and/or electives appropriate to their departmental programs and personal interests.

GENERAL EDUCATION REQUIREMENTS APPROVED LISTS

APPROVED LIST A—EXPOSITORY WRITING COURSES

See bulletin for any prerequisites.

English (ENG)

302 Legal Writing

304 Advanced Composition

327/BUS 327 Business and Technical Writing

French (FRE)

303, 304 Advanced Grammar and Writing

German (GER)

303, 304 Advanced Grammar and Writing

Mass Communications (MAC)

303 General Assignment Reporting

363 Broadcast Newswriting and Reporting

392 Advertising Copywriting

Spanish (SPA)

303, 304 Advanced Grammar and Writing

APPROVED LIST B—LITERATURE IN ENGLISH OR FOREIGN LITERATURE IN ENGLISH TRANSLATION OR UPPER-LEVEL (300-400) FOREIGN LITERATURE IN THE ORIGINAL LANGUAGE

See bulletin for any prerequisites.

Please note that this requirement calls for one of the two courses chosen to be in a literature prior to 1900. Such courses will be shown with an asterisk*.

Students who have not previously taken a high school or college-level literature survey course may wish to fulfill this requirement with a sophomore level survey course such as ENG 201 through 206. These courses will give students an extended survey of a number of works written over a relatively long period of time.

Students who have already taken survey courses may wish to fulfill this requirement with an upper-level course in English or foreign literature in English translation (FLT) or the original language. These courses will give students a more intensive experience with the literature of a particular age, genre, or writer.

Literature in English (ENG)

English courses at the 200 level are recommended. However, any upper-level (300-400) literature courses offered by or cross-listed with the English Department (excluding writing and linguistics courses) may be used to fulfill the requirement.

ENG courses covering literature prior to 1900 are ENG 201*, 203*, 205*, 241*, 319*, 320*, 321*, 322*, 335*, 361/RST 361*, 371*, 372*, 401*, 402*, 403*, 407*, 409*, 415*, 416*, 418*, 423*, 424*, 441*, 442*.

Foreign Literature in English Translation (FLT)

Any foreign literature in English translation course may be used to fulfill this requirement.

FLT courses covering literature prior to 1900 are FLT 301*, 311*, 321*.

Foreign Literature in the Original Language

French (FRE)

- 301*, 302 Survey of Literature
- 411* The Middle Ages
- 412* The Sixteenth Century
- 413* The Seventeenth Century
- 416* The Eighteenth Century
- 417* The Nineteenth Century
- 420 The Twentieth Century

German (GER)

- 301*, 302 Survey of Literature
- 416* Age of Goethe
- 417* Literature of the Nineteenth Century
- 420 Literature of the Early Twentieth Century
- 421 Modern Literature

Italian (ITA)

- 301*, 302 Survey of Literature

Latin (LAT)

- 301*, 302 Survey of Literature

Spanish (SPA)

- 301*, 302 Survey of Literature
- 321, 322 Survey of the Literature of Spanish America
- 411* The Middle Ages
- 412* The Golden Age: Renaissance
- 413* The Golden Age: Baroque
- 417* Nineteenth Century Literature
- 420 The Twentieth Century
- 425 Spanish American Literature: Prose Fiction
- 426 Spanish American Literature: Poetry Drama Essay

APPROVED LIST C—EUROPEAN HISTORY COURSES (HIS)

Bachelor of Science students may choose any of the courses shown on Lists 1 and 2 below. Also, in the sequences shown below, the first course is not a prerequisite for the second course. For example, a student may take HIS 316 prior to HIS 315.

Bachelor of Arts students must choose a sequence of courses from List 1. Bachelor of Arts students may not use courses from List 2. Any two consecutively numbered

courses from List 1 constitute a sequence. The two courses may be taken in any order.

History (HIS)

List 1

- 101, 102 Introduction to European History
- 303 Greek Civilization
- 304 Roman Civilization
- 306 The Early Middle Ages
- 307 The High Middle Ages
- 308 Europe in Renaissance
- 309 The Reformation
- 310 Europe in Absolutism and Enlightenment 1648-1815
- 311 The Zenith of European Power, 1815-1914
- 312 The Age of Total War: Europe, 1914-1945
- 313 Post-War Europe, 1945 to Present

List 2

- 315, 316 History of France
- 317, 318 History of Germany
- 319, 320 History of England
- 321, 322 History of Russia
- 323 History of Spain and Portugal
- 325, 326 History of the Jewish people
- 327/RST 327 History of Christianity
- 329, 330 European Social History
- 331 Nazi Germany
- 336 Modern European Intellectual History
- 337/ARH 432 The Origins of Modernism, 1880-1930
- 338 History of Socialism
- 403/RST 403 History of Western Religion

APPROVED LIST D—AMERICAN HISTORY

Bachelor of Science students may choose any of the courses shown on Lists 1 and 2 below. Also, in the sequences shown below, the first course is not a prerequisite for the second course. For example, a student may take HIS 352 prior to HIS 351.

Bachelor of Arts students must choose a sequence of courses from List 1. Bachelor of Arts students may not use courses from List 2. Any two consecutively numbered courses from List 1 constitute a sequence. The two courses may be taken in any order.

History (HIS)

List 1

- 103, 104 Introduction to American History
- 342 Colonial America, 1585-1763
- 343 Two American Revolutions, 1763-1800
- 344 Age of Jefferson and Jackson, 1800-1850
- 345 American Civil War, 1850-1865
- 346 The Maturing American Nation
- 347, 348 Twentieth Century U.S. History

List 2

- 351, 352 History of the South
- 353, 354 Virginia History
- 355 Virginia and the Civil War
- 356 Virginia Indians and their Neighbors
- 357, 358 American Social History
- 359 The Military in American Life
- 360 American Ethnic History
- 361, 362/AAS 361, 362 Americans from Africa
- 363, 364 History of the American Urban Experience
- 365, 366 American Intellectual History
- 369, 370 American Constitutional and Legal Development
- 374 History of the American Frontier
- 375, 376 American Diplomatic History

APPROVED LIST E—EUROPEAN CULTURE AND HERITAGE COURSES

See Bulletin for any prerequisites.

Art History (ARH)

103, 104 Survey of Western Art

European Culture/Humanities (EUC/HUM)

305 Aspects of French Culture

307 Aspects of Spanish Culture

340/USP 350 Culture and Urbanism in Great

European Cities

French (FRE)

306, 307 French Civilization I, II

Geography (GEO)

207 World Regional Geography

334 Regional Geography of Europe

German (GER)

306, 307 German Civilization I, II

History (HIS)

315, 316 History of France

317, 318 History of Germany

319, 320 History of England

321, 322 History of Russia

323 History of Spain and Portugal

Italian (ITA)

305 Italian Conversation and Civilization

Philosophy (PHI)

103, 104 Introduction to the History of Western

Philosophy

Religious Studies (RST)

331 Christianity and Culture

Spanish (SPA)

306 The Civilization of Spain

307 Latin American Civilization

APPROVED LIST F—NON-WESTERN CULTURE AND HERITAGE COURSES

See Bulletin for any prerequisites.

Afro-American Studies (AAS)

107, 108/HIS 105, 106 Introduction to

African History

200/ANT 200/USP 200 African Culture

204 Africa in Transition

333/GEO 333 Geography of Africa

387/HIS 387 History of West Africa

388/HIS 388 History of Central and East Africa

389/HIS 389 History of Southern Africa

American Studies (AMS)

301 Introduction to Native American Studies

Anthropology (ANT)

103 Cultural Anthropology

200/AAS 200/USP 200 African Culture

201 The Evolution of Man and Culture

304/SOC 304 The Family

305 Comparative Society

350/INT 350 Peoples and Culture of the World

425 Religion, Magic, and Witchcraft

Geography (GEO)

208 World Regions

333/AAS 333 Geography of Africa

History (HIS)

105, 106/AAS 107, 108 Introduction to

African History

107, 108 Introduction to Asian History

109, 110 Introduction to Latin American History

301, 302/RST 315, 316 The Ancient Near East

328 History of the Islamic World

381, 382 Modern China

384 Latin America and World Affairs

385 History of Mexico

386 History of Brazil

387/AAS 387 History of West Africa

388/AAS 388 History of Central and East Africa

389/AAS 389 History of Southern Africa

Philosophy (PHI)

408/RST 408 The Indian Tradition

410/RST 410 The Chinese Tradition in Philosophy

412/RST 412 Zen Buddhism

Political Science (POS)

355 Asian Political Systems

452 Seminar in Third World Politics

456 Government and Politics of China

Religious Studies (RST)

311 World Religions

315, 316/HIS 301, 302 The Ancient Near East

317 Islam

408/PHI 408 The Indian Tradition

410/PHI The Chinese Tradition in Philosophy

412/PHI 412 Zen Buddhism

APPROVED LIST G—HISTORY OF AN ART, ART CRITICISM, AESTHETICS, MUSIC APPRECIATION, OR PARTICIPATORY ARTS COURSES

Courses fulfilling this requirement are divided into participatory and nonparticipatory courses. Participatory courses are those primarily devoted to perfection of an artistic skill through studio work. Nonparticipatory courses are those primarily lecture- and content-oriented, with little or no studio work required.

PARTICIPATORY COURSES—COLLEGE OF HUMANITIES AND SCIENCES

English (ENG)

305 Creative Writing: Genres

426/THE 426 Playwriting

435, 436 Creative Writing: Poetry

437, 438 Creative Writing: Fiction

NONPARTICIPATORY COURSES—COLLEGE OF HUMANITIES AND SCIENCES

Philosophy (PHI)

421, 422 Aesthetics

PARTICIPATORY COURSES—SCHOOL OF THE ARTS

Art Foundation (AFO)

121E Introduction to Drawing

Art Education (AEN)

121 The Individual in the Creative Process

Other recommended courses:

353 Art and Perceptual Communications

408 Two-Dimensional Arts Experiences

409 Three-Dimensional Art Experiences

Crafts (CRA)

See bulletin for other CRA courses which are available.

Dance (DAN)

All courses excluding DAN 109-110; 209-210;

309-310; 409-410

Fashion (FDE)

All courses; check prerequisites for certain courses.

Interior Design (IDE)

103E Introductory Studio Course

Music—Applied Music (APM)

Applied Music courses numbered in the 190s are class lessons in piano, voice, guitar, and organ. Contact Department of Music for more specific information.

Private Lessons (APM 300-level Private Instruction) are available on beginning as well as advanced levels. Contact Department of Music for more information.

Applied music courses numbered 370 and 390 are large and small ensembles and chamber groups. In most cases, auditions are required. Contact Department of Music for more specific information.

Painting and Printmaking (PAP)

155E Drawing and Painting: Basic

207 Materials: Painting

209 Materials: Printmaking

226 Color Theory I

Sculpture (SCU)

311, 312 Basic Sculpture

Speech (SPE)

301 Beginning Oral Interpretation

401 Oral Interpretation of Literature

Theatre (THE)

107E, 108E Introduction to Stage Performance

103 Stagecraft

104 Costume Construction

NON-PARTICIPATORY COURSES—SCHOOL OF THE ARTS**Art History (ARH)**

103, 104 Survey of Western Art

All other ARH courses may be used but check bulletin for level and prerequisites.

Interior Design (IDE)

211, 212 Introduction to Interior Design

Music—Music, History, Literature, and Theory

CHM 331 Multiple Choir Programs

CHM 431 Hymnology

CHM 435 Liturgics

MHT 100/200 Special Offerings in Music

MHT 105-106 Fundamentals of Music Theory

MHT 117 Computers in Music

MHT 201 Acoustics

MHT 243-244 Appreciation of Music

MHT 245, 245/AAS 245, 246 Introduction to

Afro-American Music

MHT 303 Piano Literature

MHT 320 Music in Films

MHT 334 Organ Literature

MHT 421, 422 Survey of Music History

MHT 434 Choral Literature

MHT 441 American Music

MHT 442 Twentieth Century Music

MHT 471 Jazz History and Literature

Theatre (THE)

303/AAS 303 Black Theatre

307 History of Theatre

APPROVED LIST H—ETHICS COURSES

See bulletin for any prerequisites.

Philosophy (PHI)

211 Ethics

327 Ethical Theory

Political Science (POS)

341 History of Political Thought I

APPROVED LIST J—HUMAN BEHAVIOR AND INSTITUTIONS

See bulletin for any prerequisites.

Afro-American Studies (AAS)

103, 104 Introduction to Afro-American Studies

105/SOC 105 Sociology of Racism

305/SOC 305 Sociology of the Black Family

307/RST 307 Black Religion

310/ECO 310 Economics and Poverty

311/USP 337 Urbanization and Blacks

321/USP 321 Urban Economics

322/PSY 322 Personality and Behavior of the Afro-American

343/POS 343 Black Political Thought

Anthropology (ANT)

ANT 103 Cultural Anthropology is a prerequisite for many ANT courses and is recommended as the basic course. With completion of any prerequisites, the following are recommended:

201 The Evolution of Man and Culture

311/GEO 311 History of Human Settlement

350/INT Peoples and Cultures of the World

Economics (ECO)

201-202 Principles of Economics

203 Introduction to Economics

With completion of prerequisites, the following are recommended.

306 Public Finance—Federal

301/AAS 310 Economics and Poverty

321/USP 321 Urban Economics

421 Government and Business

431 Labor Economics

Geography (GEO)

102 Introduction to Cultural Geography

311/ANT 311, 312 History of Human Settlement

322 World Political Geography

Political Science (POS)

POS 101, 102 American Government; 201 Introduction to Political Science; and 202 Introduction to Comparative Government are recommended as basic courses. However, all POS courses may be used to fulfill this requirement **excluding** the following: POS 214, 316, 320, 331, 334, 432, 448, 492, 494, 498, and 499.

Psychology (PSY)

PSY 101 General Psychology is a prerequisite for all upper-level PSY courses and is recommended as the basic course. With the completion of this prerequisite, all PSY 300 and 400 level courses may be used to fulfill this requirement **excluding** the following: PSY 317, 318, 415, 492, 493, and 498-499.

Religious Studies (RST)

101 Introduction to Religious Studies

301 Introduction to the Old Testament

302 Introduction to the New Testament

307/AAS 307 Black Religion

311, 312 Religions of the World

334 Religions in Contemporary America

Sociology (SOC)

SOC 101 General Sociology is a prerequisite for many SOC courses and is recommended as the basic course. With the completion of any prerequisites, all SOC courses may be used to fulfill this requirement **excluding** the following: SOC 214, 319, 320, 421, 492, and 493.

Social Science (SSC)

303 Marriage and Family Relations

330 The Psychology and Sociology of Death
340 Human Sexuality

HUMANITIES AND SCIENCES UNDECIDED PROGRAM

Exploratory Program for Students Undecided About a Major

LYNN S. BRYANT

Coordinator

Recognizing that some students seeking admission to VCU may not wish to choose a particular school on the Academic Campus in which to study by the time they apply or enroll, the university recommends that the students enroll in the College of Humanities and Sciences. The advising program is flexible enough to suit the interests of any undecided students, yet the courses recommended are basic to a variety of majors.

The undecided student will be assigned a faculty advisor with whom the student must meet at least once a semester prior to advanced registration. The advisor and the student will assess the general academic direction of the student's interests and plan a program of studies to assist the student to define his or her academic objectives more clearly.

Students admitted into the "humanities and sciences undecided" category are encouraged to select a major by the end of two years of study. Students must declare a major within one of the university's schools no later than the semester in which they will complete 60 credits.

Listed below are freshman and sophomore level courses from which "undecided" students should choose courses to explore in various fields.

As undecided students begin to make decisions about a major, they should consult that major's specific requirements listed in the bulletin for courses which should be taken in the freshman and sophomore years.

Suggested Courses for Humanities and Sciences Undecided Students Among Various Schools

A. Most Transferable Courses

ENG 101-102 Composition and Rhetoric (placement test required)
HIS 101-102 Introduction to European History
HIS 103-104 Introduction to American History
PSY 101 General Psychology
SOC 101 General Sociology
SPE 121 Effective Speech
BIO 101-102 General Biology, CHE 101-102 General

Chemistry, PHY 207, 208 University Physics I, II, with laboratories
ECO 201-202 Principles of Economics
MAT 100 or 111 (placement test required)
Physical Education

B. Second Level of Most Transferable Courses

POS 101 American government
ARH 103 Art History, General
AAS 103-104 Introduction to Afro-American Studies
PHI 103-104 Introduction to History of Western Philosophy
PHI 205 Introduction to the Problems of Philosophy
PHI 221 Critical Thinking and PHI 222 Formal Logic

If School is Probably Arts:

AEN 121-122 Art Education
AFO 113-114 Basic Drawing, AFO 115-116 Fundamentals of Design (permission of director of program)
ARH 103-104 Art History, General
CRA 201-202 Metalsmithing, CRA 211-212 Jewelry, CRA 241-242 Beginning Ceramics, CRA 261-262 Beginning Textiles
FDE 209 Textile Laboratory, FDE 221E Beginning Dress-making
IDE 103-104 Introductory Studio Course, IDE 217-218 Great Houses and Monuments: Europe and America
PAP 155E-156E Drawing and Painting, Basic
SCU 211-212 Basic Sculpture
THE 111 Introduction to Theatre, THE 307-308 History of the Theatre
Private Music Lessons
APM 100 Aural Skills
APM 191-192 Class Lessons in Piano
APM 193-194 Class Lessons in Voice
APM 195-196 Class Lessons in Guitar
APM 197-198 Class Lessons in Organ
APM 370 Large Ensembles
APM 390 Chamber Ensembles
MHT 105-106 Fundamentals of Music Theory
MHT 117 Computers in Music
MHT 201 Acoustics

If School is Probably Humanities and Sciences:

ANT 103 Cultural Anthropology
ENG 101-102 Composition and Rhetoric (placement test required)
Foreign Language (placement test required if continuing in high school language)
HIS 101-102 Introduction to European History
HIS 103-104 Introduction to American History
HIS 105-106 Introduction to African History
HIS 107-108 Introduction to Asian History
HIS 109-110 Introduction to Latin American History
Laboratory Science—two-course sequence with laboratories—BIO 101-102 General Biology, CHE 103-104 Introduction to Modern Chemistry, PHY 101-102 Foundations and Frontiers of Physics
MAT 100 Unitized Mathematics, or MAT 111 Basic Mathematics for Behavioral, Social, and Management Sciences (placement test required)
PHI 103, 104 Introduction to the Problems of Philosophy
PHI 205 Introduction to Problems of Philosophy
POS 101 American Government and POS 201 Introduction to Political Science
PSY 101 General Psychology
RST 101 Introduction to Religious Studies
SOC 101 General Sociology

If School is Probably Business:

BUS 111-112 Basic Mathematics and Elements of Calculus for Behavioral, Social and Management Sciences

BUS 121 The Business Environment

BUS 203-204 Introduction to Accounting

ECO 201-202 Principles of Economics

ENG 101-102 Composition and Rhetoric (placement test required)

Elective in history or political science

A natural science elective

Elective in sociology, psychology or anthropology

If School is Probably Community and Public Affairs:

Life or Physical Science, 3 hours (no laboratory necessary)

AJP 181 Survey of the Administration of Justice, REC 195

Recreational Leadership, REC 261 Recreation in Modern society, REH 201 Introduction to Rehabilitation

CSE 315 Evolution of the American City

CSE 316 Urban Life in Modern America

ENG 101-102 Composition and Rhetoric

Humanities electives, 6 hours

Social sciences, 9 hours

MAT 111/BUS 111 Basic Mathematics for Behavioral, Social, and Management Sciences (placement test required)

PSY 101 General Psychology

SOC 101 General Sociology

If School is Probably Education:

CSC 150 Basic Computer Concepts

ENG 101-102 Composition and Rhetoric (placement test required)

ENG 200 Level Literature

MAT 101-102 College Algebra and Trigonometry or

MAT 115-116 Modern Elementary Mathematics (Elementary and Special Education only)—Placement test required for either series

HED 300 Introduction to Health Education

HIS 103 Introduction to American History

ECO 203 Introduction to Economics

PHE 102 Fitness and Weight Control

PSY 101 General Psychology

SOC 101 General Sociology

BIO 101-102 General Biology

BIO L101-L102 Biology Lab

SPE 121 Effective Speech

Physical Education Activity Courses

If School is Probably Social Work:

ANT 103 Cultural Anthropology

ENG 101-102 Composition and Rhetoric (placement test required)

BIO 101-102 General Biology

MAT 111/BUS 111 Basic Math for Behavioral, Social, and Management Sciences (placement test required)

PSY 101 General Psychology

SOC 101 General Sociology

Social/behavioral science electives, 6 hours (political science, economics, history)

Electives, 6 hours

EDUCATIONAL SUPPORT PROGRAMS

QUINCY L. MOORE

Director

The College of Humanities and Sciences administers educational assistance programs to help potential university students succeed in academic work. A full description of these programs can be found in Part II of this bulletin.

UNDERGRADUATE CREDIT BY EXAMINATION

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the College of Humanities and Sciences provides its students the opportunity to accelerate their education through "credit-by-examination." A full description of this program can be found in Part V of this bulletin.

HONORS PROGRAM

THOMAS O. HALL, JR.

Coordinator

General Information

The purpose of the Honors Program is to assist in the implementation of the university's commitment to excellence by attracting and meeting the academic needs of superior students. Academic and other opportunities will be provided so that students of such ability will be encouraged to perform at the highest level of their competency.

Eligibility Requirements

The program is open to qualified entering freshmen, students who demonstrate excellence after enrolling at VCU, and transfer students who have shown similar outstanding ability. Eligibility is determined according to the following criteria:

1. Presidential scholars and high school graduates with SAT scores of 1200 or above and who ranked in the upper 15 percent of their graduating class will be admitted automatically. This also applies to continuing VCU students and to transfers who meet the above criteria and have a 3.5 GPA in college.

2. Continuing VCU students and transfers who have at least 30 hours college credit, 1100 SATs, and a 3.5 college GPA are encouraged to apply. Admission will be by the decision of the honors coordinator. The continuing student's application must be supported by a VCU faculty member.

To continue in the Honors Program, a student

must maintain a cumulative 3.5 GPA. If the cumulative GPA falls below 3.5 or if the semester GPA falls below 3.0, the student will be on probation and may not remain in honors more than one semester without correcting the deficiency. To graduate in the Honors Program a student must have at least a 3.5 cumulative GPA and 3.2 GPA in honors courses. To be granted honors, the student must present a dossier showing how the honors requirements have been met. The Honors Council will evaluate the academic dossier and decide whether honors should be granted.

3. If you are planning a career in

- dentistry
- dental hygiene
- health care management
- medical record administration
- medical technology
- nursing
- occupational therapy
- pharmacy
- physical therapy
- medicine

then you are eligible for the VCU Honors tract for Pre-Health Science Students. Transfer students (30 hours of college credit, 1100 SATs, and a 3.50 college GPA) planning to enter the MCV Campus Program in Health Care Management or Dentistry will also be considered for admission.

Guidelines

1. The honors student should meet the *goals* of the College of Humanities and Sciences' general education requirements.

2. At least one course at the upper level should be taken from each of the liberal arts divisions of the college: humanities, social sciences, and natural sciences.

3. At least **18 hours** credit in courses labelled as *honors* courses must be completed. At least nine hours credit must be taken from an honors core curriculum consisting of a variety of 300 level modular courses. Each semester three modules will be offered. Each will carry 1.5 hours credit though the courses will meet three hours per week. Each of the college's liberal arts divisions will be represented in the six modules offered each academic year. The following general themes have been established: Continuity and Change, 1986-87; Societal Control in the Twentieth Century, 1987-88; and From Quack-

ery to Cornerstone Theory, 1988-89. Mass communications and other schools may offer modules. Honors students are encouraged to fulfill this requirement in their second year. All other humanities and sciences offerings labeled as honors courses may be included in the minimum requirements of 18 credit hours. This includes courses cross-listed with a departmental label and an honors label as well as departmental honors courses. Generally, students not in the Honors Program may enroll in honors courses provided the permission of the class instructor is obtained.

Of particular note, the ideas expressed above are to be considered as guidelines to the development of a dossier. Only the modular core course is required of all students in the program. The central objective of the Honors Program is that the student demonstrate good scholarship and sound learning in the best of the liberal arts tradition.

Special Features

Honors students will be provided with special library, registration, and housing privileges. Scholarships, an honors lounge, a lecture series with distinguished speakers, and other special activities are also planned as part of the program. Students who complete this program successfully will have it noted on transcripts and diplomas that they were graduated with honors.

All students interested in a health sciences career who meet the eligibility requirements stated above and have been accepted to the university will be admitted into Honors tract for Pre-Health Science Students. In addition, these students will automatically be considered for *early acceptance* into a Medical College of Virginia Campus Program in medicine, dentistry, dental hygiene, health care administration, medical technology, nursing, occupational therapy, medical record administration, pharmacy, and physical therapy. That is, each year, some entering freshmen will be guaranteed admission into an MCV Campus *professional* program during the spring of their senior year in high school. To maintain this guaranteed admission status, the students must have a 3-semester (6-semester for dentistry and medicine) GPA of 3.50 or better, be progressing satisfactorily with their honors courses, and fulfill any special requirements set up by the MCV Campus program to which they have been admitted. That is, they would *not* have to compete with the regular pool

of applicants during their sophomore year (senior year for dentistry and medicine). Each MCV school/department will decide on the number of students to whom early acceptance would be granted each year.

Selection procedures for early acceptance:

1. Early application to the university is encouraged. At the same time application is being made to the university, an application for early acceptance Honors Program should be requested. (See address below.) The deadline for submission of this application is January 15.

2. An on-campus interview may be required as part of the selection process.

3. Selection of students will be the responsibility of an admissions committee composed of individuals from the MCV Campus program and the Academic Campus Honors Council. Selection of students is expected to occur in late February/early March, with notification by March 15.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students in the College of Humanities and Sciences who are pursuing undergraduate degrees in biology, chemistry, economics, English, history, mass communication, mathematical sciences (including computer science, operations research, and statistics), philosophy, political science, psychology, and sociology. A full description of the program appears on page 281 of the *Bulletin*.

DEGREE PROGRAMS AND MINORS

SCHOOL OF MASS COMMUNICATIONS

GEORGE T. CRUTCHFIELD

Director

Robert Bohle
Frank Coakley
Joyce Dodd
Jack Haberstroh
Robert Hughes

Ted Joseph
David Kennamer
James Looney
June Nicholson
Ted White
Paul Wright

Part-time—

Jack R. Hunter

The objectives of the School of Mass Communications are to prepare students for careers in the mass media and related fields and to encourage high standards of ethical and journalistic performance. The prescribed courses in the School of Mass Communications provide a broad educational base and instruct students in

the techniques of mass communications.

The School of Mass Communications offer a Bachelor of Science degree in mass communications with specialization in the following sequences:

1. **News Editorial Sequence.** This concentration is intended primarily for those who wish to prepare themselves for newspaper writing or editing positions.
2. **Advertising/Public Relations Sequence.** (a) The advertising concentration is designed to prepare students for careers in advertising departments of manufacturers and retailers, advertising agencies, advertising media, and advertising service organizations and (b) the public relations concentration is designed to prepare students for employment in industry, government, nonprofit associations or agency public relations work.
3. **Broadcast News Sequence.** This concentration is designed for students who wish to prepare themselves for radio and television journalism.

The school maintains a placement service to aid students in obtaining positions after graduation.

Master of Science in Mass Communications. For information about graduate work in mass communications, see the *VCU Graduate Bulletin*.

DEGREE REQUIREMENTS

Bachelor of Science in Mass Communications. The Bachelor of Science curriculum in mass communications requires a minimum of 124 credits, including 30-31 credits in mass communications courses. The school is divided into a lower division (freshman, sophomore) and an upper division (junior, senior).

Only two courses in the major, MAC 101 Mass Communications and MAC 203 News Writing, may be taken in the lower division. Students must successfully complete a language skills test and have a minimum typing speed of 35 wpm to enroll in MAC 203 News Writing. Proof of typing skills must be established via examination or completion of a college-level typing course with a grade of "C" or better.

To be admitted to the upper level, students must meet the following requirements: a grade-point average of 2.25 in all courses, completion of MAC 101 Mass Communications and MAC 203 News Writing (with a "C" grade or better), successful performance on language skills tests during the MAC 203 semester, and completion of the following courses: ENG 101-102, HIS 103-104, ECO 201-202, MAT 101-STA 213, POS 102, laboratory science (8 credit hours), and a foreign language (6-8 credit hours).

A formal petition for admission to upper-

division status must certify completion of these requirements and selection of an area of mass communications specialization. Students in the upper division must maintain a 2.25 grade-point average. Students who transfer to VCU with junior standing and meet other qualifications for admission to the upper division will be placed on one semester's probation to establish the grade point average requirement.

The student admitted to the upper level will choose one of the following concentrations:

Advertising

- 380 Introduction to Advertising
- 381 Advertising Media
- 392 Advertising Copywriting
- 394 Advertising Layout and Production
- 408 Communications Law
- 480 Media Strategy
- 481-482 Advertising Campaigns

Public Relations

- 300 Media Graphics
- 303 General Assignment Reporting
- 320 Broadcasting for PR
- 323 Public Relations
- 380 Introduction to Advertising
- 408 Communications Law
- 423 Advanced Public Relations
- 425 Public Opinion
- 426 Editing PR Publications

News Editorial

- 300 Mass Media Graphics
- 303 General Assignment Reporting
- 304 Reporting Public Affairs
- 305 Editing and Makeup
- 375 Legislative Reporting
- 403 Specialized Reporting
- 404 Reporting in the Public Interest
- 405 Advanced Editing
- 407 Newspaper Management
- 408 Communications Law

Broadcast News

- 361 Principles of Broadcasting
- 362 Newscasting
- 363-364 Broadcast Newswriting and Reporting
- 365-366 Broadcast News Production
- 375 Legislative Reporting
- 408 Communications Law
- 461 Documentary
- 463-464 Radio and TV Practicum

Collateral requirements for the tracks include: Advertising—BUS 308 and EDU 407, Public Relations—BUS 308 and EDU 407, Broadcast News—SPE 262.

In addition to the MAC and collateral courses listed previously, students must also take any two additional history courses; two literature courses taught by the English Department, one of which must be in literature prior to 1900; POS

322 State and Local Government; SPE 321 Speech for Business and the Professions; PTY 301 Photo-Journalism; one course from the following: CSC 201 Introduction to Computing, CSC 255 Structured Programming, STA 214 Applications of Statistics, CSC 150 BASIC Computer Concepts.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in mass communications. A full description of the program appears on page 281 of the *Bulletin*.

MINOR IN AFRO-AMERICAN STUDIES

RICHARD K. PRIEBE
Acting Coordinator

The minor in Afro-American Studies shall consist of 18 credits. Students may select AAS 103 or 104 Introduction to Afro-American Studies and at least one course in each of the following areas: 1) Africa, 2) African-Americans, and 3) Africa and African-American Arts. Courses in Afro-American Studies are designed to help students gain knowledge and appreciation of the history and culture of Africans and Afro-Americans and their contributions to world civilizations.

MINOR IN AMERICAN STUDIES

RICHARD A. FINE
Coordinator

The minor in American studies, offered jointly by the Departments of English and History, shall consist of at least 18 upper-level credits to be distributed as follows: 1) AMS 394 Perspectives in American Studies and AMS 391 Topics in American Studies (6 credits); 2) humanities electives (3-6 credits); 3) social science electives (3-6 credits); and 4) approved electives or independent study (0-3 credits). All courses selected to fulfill distribution areas should deal with American materials and topics. A list of recommended courses and electives is maintained by the coordinator.

ANTHROPOLOGY

See sociology and anthropology.

APPLIED MATHEMATICS

The B.S. in mathematical sciences/applied mathematics is offered by the Department of

Mathematical Sciences. See Mathematical Sciences.

BIOLOGY

JACKSON E. JEFFREY

Chairman of the Department

JAMES E. GATES

Assistant Chairman

Charles R. Blem

Russell V. Brown

Carolyn M. Conway

Michael L. Fine

Gregory C. Garman

Miles F. Johnson

Margaret L. May

Richard R. Mills

John D. Reynolds

Leonard A. Smock

Gayle C. Turner

Stanley R. Webb

Martha D. Berliner

Leann B. Blem

Joseph P. Chinnici

Catherine J. Corson

Robert W. Fisher

T. Daniel Kimbrough, Jr.

Sara M. McCowan

John F. Pagels

Arthur J. Seidenberg

Jennifer K. Stewart

Jeanne M. Todd

Donald R. Young

Part-time

Craig Corson

The curriculum in biology prepares students for graduate study in biology; for admission to schools of medicine, dentistry, and veterinary medicine; for admission to allied health programs; for employment in laboratory or field programs in private industry or governmental agencies; and for teaching in secondary schools.

The Department of Biology offers two undergraduate degree programs:

1. Bachelor of Science in biology
2. Bachelor of Science with a teaching major in biology conferred through the School of Education

Preprofessional Study for the Health Sciences. The Bachelor of Science in biology program provides a four-year course of study in preparation for medical, dental, or veterinary school. The department also offers a variety of two-year preprofessional programs in the allied health professions.

Master of Science in Biology. For information about the graduate program in biology, see the *VCU Graduate Bulletin*.

Nonmajor Electives. The department offers a variety of courses which do not fulfill the major or minor requirements and are not specific requirements for prehealth science students. These courses are offered to develop the general science literacy of the non-biology major.

Degree Requirements

Bachelor of Science in Biology. The Bachelor of Science curriculum in biology requires a

minimum of 124 credits, including 40 credits in biology. In addition to the BIO courses required for the Bachelor of Science degree in biology, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

Majors must take any two of the following three mathematical sciences options:

1. CSC 201 Introduction to Computing or CSC 255 Structured Programming
2. MAT 200 Calculus with Analytical Geometry
3. SAT 213 Introduction to Statistics

In preparation for any of these mathematical sciences options, all students must take the Mathematics Placement Test. Depending on the results, the students may be placed in MAT 101 College Algebra prior to enrolling on one of the above mentioned courses.

Freshman year. BIO 101-102 General Biology and BIO L101-102 General Biology Laboratory I and II, CHE 101-102, General Chemistry and CHE L101-102 General Chemistry Laboratory I and II, and mathematical sciences courses selected from the options described above.

Sophomore year. BIO 218 Cell Biology, BIO-CORE 10 credits, CHE 301-302 Organic Chemistry and CHE L301-302 Organic Chemistry Laboratory I and II, and mathematical sciences courses if not already completed.

Junior year. BIOCORE 4 credits, PHY 207, 208 University Physics, or PHY 201-202 General Physics and BIOAREAS 3 credits.

Senior Year. BIOAREAS 12 credits.

BIOCORE. The following courses must be taken by majors:

101, 102, L101, L102 General Biology and Laboratory I, II

218 Cell Biology

310 and L310 Genetics and Genetics Laboratory

317 Ecology

Organismal Biology. One course from each of the following groups:

Animal Group

301 Comparative Vertebrate Anatomy

302 Animal Embryology

312 Invertebrate Zoology

313 Vertebrate Natural History

Plant Group

- 319 Survey of the Plant Kingdom
- 320 Biology of the Seed Plant
- 321 Plant Development

At least eight laboratory courses must be taken from BIOCORE and BIOAREAS courses.

BIOAREAS. The remaining courses in biology must be chosen from one or more of the following areas. Courses at the 500 level listed in this bulletin are open to qualified seniors and graduate students only.

1. Cellular/Molecular

- 303 Bacteriology
- 311 General Physiology
- 405 Bacterial Physiology
- 420 Plant Physiology
- 455 Immunology and Serology
- 504 Comparative Animal Physiology
- 507 Aquatic Microbiology
- 524 Endocrinology
- 550 Developmental Biology
- 585 Virology

2. Organismal

- 301 Comparative Vertebrate Anatomy
- 302 Animal Embryology²
- 309 Entomology
- 312 Invertebrate Zoology²
- 313 Vertebrate Natural History²
- 319 Survey of the Plant Kingdom²
- 320 Biology of the Seed Plant²
- 321 Plant Development²
- 327 Plant Pathology
- 403 Ichthyology
- 406 Mycology
- 409 Plant Anatomy
- 410 Plant Taxonomy
- 411 Summer Flora
- 413 Parasitology
- 415 Aquatic Macrophytes
- 416 Ornithology
- 417 Mammalogy
- 429 Neuroanatomy
- 435 Herpetology
- L436 Laboratory in Herpetology

3. Environmental

- 307 Aquatic Ecology
- L317 Ecology Laboratory
- 401 Applied and Environmental Microbiology
- 431 Introduction to Marine Biology
- 432 Biology of Polluted Waters
- 514 Advanced Freshwater Ecology
- 518 Plant Ecology
- 519 Marine Ecology

4. General

- 200 Biological Terminology
- 291 Topics in Biology

²These courses may be used to fulfill the BIO AREA requirement if not previously used to fulfill the BIOCORE requirement.

- 292 Independent Study
- 300 Basic Biological Microtechniques
- 308 Vertebrate Histology
- 430 Human Genetics
- 445 Animal Behavior
- 491 Topics in Biology
- 492 Independent Study
- 512 Radiation Biology
- L512 Radiation Biology Laboratory
- 522 Evolution and Speciation

Minor in Biology

The minor in biology shall consist of 21 credits, including the following: BIO 101-102, L101, L102 General Biology and Laboratory I and II; BIO 218 Cell Biology, BIO 310 Genetics; BIO 317 Ecology and one of the following courses: BIO 301 Comparative Vertebrate Anatomy, BIO 302 Animal Embryology; BIO 312 Invertebrate Zoology; BIO 313 Vertebrate Natural History; BIO 319 Survey of the Plant Kingdom; BIO 320 Biology of the Seed Plant; or BIO 321 Plant Development.

In completing the minor in biology, the student is also required to complete CHE 101-102, L101, L102 General Chemistry and General Chemistry Laboratory I and II, and CHE 301-302, L301, L302 Organic Chemistry and Organic Chemistry Laboratory I and II.

Honors in Biology

Biology majors in the B.S. program may earn honors in biology. To enter this program, they must have at least 20 credits in biology and a 3.3 overall grade-point average in their work with at least a 3.3 grade-point average in biology. Application to enter the honors in biology program must be made in the sophomore or junior year. Students who complete this program successfully will graduate with honors in biology and the notation will be placed on the transcripts.

Students will successfully complete the honors in biology program when they (1) complete two credits in BIO 491 Honors Seminar and four credits in BIO 492 Independent Study-Honors Section with a 3.25 grade-point average, and (2) present a 3.3 grade-point average in all biology courses presented for the major. The honors in biology student must meet all the Department of Biology requirements for graduation. Students should consult with their advisors to create a program adapted to their particular needs and interest.

Cooperative Education Program

The Cooperative Education Program is avail-

able to qualifying students pursuing an undergraduate degree in biology. A full description of the program appears on page 281 of the *Bulletin*.

Bachelor of Science in Secondary Education. The Bachelor of Science curriculum with a teaching major in biology requires a minimum of 124 credits, including 32 credits in biology. For the B.S. program in biology education, see the listings of the Division of Teacher Education, School of Education.

CHEMISTRY

GORDON A. MELSON

Chairman of the Department

ALBERT T. SNEDEN

Associate Chairman

Robert G. Bass

Raphael M. Ottenbrite

Sarah C. Rutan

Stuart J. Silvers

Syang Y. Su

Joseph A. Topich

Lawrence J. Winters

Frederick M. Hawkrigde

Robert J. Moore

Donald D. Shillady

Billy L. Stump

James Turner

Lidia M. Vallarino

The purpose of the curriculum in chemistry is to prepare students for graduate study in chemistry; for teaching in secondary schools; for employment in chemical and industrial laboratories and in related fields of business and industry; and for admission to schools of medicine, dentistry, and veterinary medicine.

The Department of Chemistry offers three undergraduate degree programs:

1. Bachelor of Science in chemistry. Two options are available: the chemical science program and the professional chemist program. The chemical science program is suitable for pre-professional study for the health sciences and other interdisciplinary areas where an emphasis in chemistry is desirable. The professional chemist program requires a greater concentration in chemistry. It is approved by the American Chemical Society Committee on Professional Training. Upon satisfactory completion of the degree requirements the student is certified by the American Chemical Society.
2. Bachelor of Arts in chemistry. The program allows the student to follow a curriculum in chemistry, but it provides more opportunity for electives in other liberal arts areas.
3. Bachelor of Science with a teaching major in chemistry conferred through the School of Education.

In addition, the department offers required and elective courses in chemistry for students in other programs of study.

Preprofessional Study for the Health Sciences. The Bachelor of Science and Bachelor of Arts in chemistry programs, with the proper selection of electives, satisfy admission re-

quirements to most schools of medicine or dentistry.

Master of Science and Doctoral Program in Chemistry. For information about these programs in chemistry, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Science in Chemistry. The Bachelor of Science in chemistry curriculum for **Professional Chemists** requires a minimum of 124 credits, including a minimum of 44 credits in chemistry. In addition to the CHE courses required for the Bachelor of Science degree in chemistry, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Freshman Year. CHE 101-102 General Chemistry and CHE L101-102 General Chemistry Laboratory I, II; MAT 102, 200 Trigonometry and Calculus with Analytic Geometry. (In preparation for MAT 102, all students must take the Mathematics Placement Test. Depending on the results, the student may be placed in MAT 101 College Algebra prior to enrolling in MAT 102.)

Sophomore Year. CHE 309 Quantitative Analysis; CHE 301-302 Organic Chemistry and CHE L301-302 Organic Chemistry Laboratory I, II; MAT 201 Calculus with Analytic Geometry; MAT 307 Multivariate Calculus; PHY 207, 208 University Physics I, II or with permission in special cases, PHY 201-202 College Physics.

Junior Year. CHE 303-304 Physical Chemistry, CHE L 304 Physical Chemistry Laboratory, MAT 301 Differential Equations.

Senior Year. CHE 406 Inorganic Chemistry, CHE 409 Instrumental Analysis, CHE 510 Atomic and Molecular Structure, CHE 403 Qualitative Organic Chemistry, or CHE L406 Inorganic Chemistry Laboratory or a minimum of two credits of CHE 492 Independent Study must be selected as an approved elective in the junior or senior year.

The Chemical Science Option for the Bachelor of Science in chemistry allows the student to select more courses from other disciplines. This

program has less stringent requirements in mathematics, physics, and chemistry, and is particularly suitable for students intending to study medicine or dentistry.

It requires a minimum of 124 credits, including a minimum of 35 credits in chemistry. In addition to the CHE courses required for the Bachelor of Science degree in chemistry, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences General Education Requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Freshman Year. CHE 101–102 General Chemistry and CHE L101–L102 General Chemistry Laboratory I, II; MAT 102, 200 Trigonometry and Calculus with Analytical Geometry. (In preparation for MAT 102, all students must take the Mathematics Placement Test. Depending on the results, the student may be placed in MAT 101 College Algebra prior to enrolling in MAT 102.)

Sophomore Year. CHE 309 Quantitative Analysis; CHE 301–302 Organic Chemistry and CHE L301–L302 Organic Chemistry Laboratory, I II; MAT 201 Calculus with Analytical Geometry; PHY 207, 208 University Physics I, II; PHY 201–202 College Physics.

Junior Year. CHE 303 Physical Chemistry or with permission, CHE 305 Introduction to Physical Chemistry; CHE 304 Physical Chemistry; CHE L304 Physical Chemistry Laboratory.

Senior Year. Approved chemistry electives 3 credits minimum — may include BIC 304 Biochemistry.

Bachelor of Arts in Chemistry. The Bachelor of Arts curriculum in chemistry requires a minimum of 124 credits, including 35 credits in chemistry. In addition to the CHE courses required for the Bachelor of Arts degree in chemistry the courses required and their recommended sequence are the same as given above for the chemical science B.S. degree program. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

German is recommended for the foreign language general education requirement.

Minor in Chemistry

The minor in chemistry shall consist of at least 18 credits, distributed as follows: 10 credits in CHE 101–102, L101, L102 General Chemistry and Laboratory I and II; and a minimum of eight credits selected from: CHE 309 Quantitative Analysis or CHE 301, L301 Organic Chemistry and Laboratory I or either CHE 303 Physical Chemistry or CHE 305 Introduction to Physical Chemistry. If CHE 101–102, L101, L102 General Chemistry and Laboratory I and II are used for the humanities and sciences laboratory science general requirement, 10 or more additional credits of upper-level (300–400) chemistry must be completed in lieu of CHE 101–102, L101, L102. Prerequisites in mathematics and physics should be noted.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in chemistry. A full description of the program appears on page 281 of the *Bulletin*.

Bachelor of Science in Secondary Education. The Bachelor of Science curriculum with a teaching major in chemistry requires a minimum of 124 credits, including 32–34 credits in chemistry. For the B.S. program in chemistry education, see the listings of the Division of Teacher Education, School of Education.

COMPUTER SCIENCE

The B.S. in mathematical sciences/computer science is offered by the Department of Mathematical Sciences. A minor in computer science is also offered. See Mathematical Sciences.

ECONOMICS

GEORGE E. HOFFER

Chairman of the Department

See School of Business section of this bulletin for listing of Department of Economics faculty.

Economics is the science of making choices. It is the study of how the goods and services we want get produced and how they are distributed among us.

The Department of Economics offers two degree programs:

1. Bachelor of Science in economics, conferred by the College of Humanities and Sciences with a required core of liberal arts courses. (This degree program is described below.)

2. Bachelor of Science in economics, conferred by the School of Business with a required core of business courses. (For further information on this program, see School of Business section in this bulletin.)

The degree in economics conferred through the College of Humanities and Sciences is designed for the following purposes:

1. To prepare students for careers as economists, and such other areas as public administration, social service, the financial sector, and business.
2. To prepare students for graduate work in economics.
3. To prepare students for graduate work in professional schools, such as law, public administration, and medicine.

In addition, the department offers required and elective courses for students in other programs of study throughout the university.

Degree Requirements

Bachelor of Science in Economics. The Bachelor of Science curriculum in economics requires a minimum of 124 credits, including 36 credits in the major (33 credits in economics plus STA 213 Introduction to Statistics).

The student majoring in economics must complete the following courses: ECO 201–202 Principles of Economics, ECO 301 Microeconomic Theory, ECO 302 Macroeconomic Theory, ECO 307 Money and Banking, ECO 489 Senior Economics Seminar, STA 213 Introduction to Statistics, an additional 15 credits of electives in upper-level (300–400) economics courses.

In addition to the ECO and STA courses required for the Bachelor of Science degree in economics, the student must choose two courses in mathematics from the following options, and one course in computer science (CSC), preferably CSC 201 Introduction to Computing. Selection of the courses will depend on the student's objectives and score on the Mathematics Placement Test. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

- (1) MAT 111–112 Basic Mathematics and Elements of Calculus for the Behavioral, Social, and Management Sciences; (2) MAT 101–200 College Algebra and Calculus with Analytic Geometry; or (3) MAT 102–200 Trigonometry and Calculus with Analytic Geometry; or (4) MAT 200–201 Calculus with Analytic Geometry.

In selecting approved electives to meet the general requirements of the College of Humanities and Sciences, it is recommended that stu-

dents select courses related to a major in economics—specifically, courses in accounting, history, mathematics and statistics, philosophy, political science, sociology–anthropology, and finance, preferably with several courses in one or two of these subjects.

Minor in Economics

The minor in economics offered through the College of Humanities and Sciences shall consist of at least 18 credits including the following: (1) ECO 201–202 Principles of Economics; (2) one or more courses chosen from ECO 301 Microeconomic Theory, ECO 302 Macroeconomic Theory or ECO 303 Theory of the Firm and; (3) the remaining courses chosen from upper-level (300–400) economics courses.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in economics. A full description of the program appears on page 281 of the *Bulletin*.

ENGINEERING

A dual physics/engineering degree program is offered in cooperation with Auburn University, Old Dominion University, and George Washington University. For further details, see the Department of Physics section of this bulletin.

ENGLISH

DOROTHY M. SCURA

Chairman

MARK W. BOOTH

Associate Chairman

JAMES J. KINNEY

Director of Composition and Rhetoric

LAWRENCE F. LABAN

Director of Graduate Studies

ANN M. WOODLIEF

Director of Undergraduate Studies

GREGORY E. DONOVAN

Coordinator of M.F.A. in Creative Writing

Robert A. Armour

Lynn Z. Bloom

Walter R. Coppedge

E. F. Duke

Richard A. Fine

Vanessa L. Haley

David Latané

Robert C. Markham

James D. Pendleton

Elisabeth R. Reynolds

Gary Sange

Dave Smith

Warren Weinstein

Jeanne F. Bedell

Boyd M. Berry

Elizabeth V. Boone

Daryl C. Dance

Sally Doud

Maurice Duke

C. W. Griffin

Marguerite Harkness

A. Bryant Mangum

George C. Longest

Paule Marshall

Charlotte C. Morse

Richard K. Priebe

J. Ellington White
Esther H. Vassar

Nicholas A. Sharp

The purpose of the curriculum in English is to help the student acquire an understanding of our literary heritage and its relationship to contemporary life, to develop an appreciation and practical knowledge of the modes of literary expression, and to prepare for advanced work in English language and literature.

The Department of English offers two undergraduate degree programs:

1. Bachelor of Arts in English.
2. Bachelor of Science with a teaching major in English conferred through the School of Education.

In addition the department offers required and elective courses in English composition, language, and literature for students in other programs of study as well as for those majoring in English.

Master of Arts in English/English Education and Master of Fine Arts In Creative Writing

For information about the graduate program in English/English education, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Arts in English. The Bachelor of Arts curriculum in English requires a minimum of 124 credits, including 30 upper-level (300–400) credits beyond the credits of English used to fulfill the general education requirement. Majors normally take ENG 203 and 204 English Literature, although they may substitute with advisor's permission an equivalent six hours in upper-division courses not to be counted toward the satisfaction of the six-hour distribution requirement in English literature outlined below. Six credits may be taken in foreign literature in English translation (FLT) offered by the Department of Foreign Languages.

Along with the general education requirements of the College of Humanities and Sciences for the B.A. degree and the Academic Campus requirements, students in the Bachelor of Arts curriculum in English must choose their English major electives so that there will be a minimum of six upper-level credits from each of the following areas: (1) English literature; (2) American literature; (3) comparative literature; and (4) linguistics, criticism, and advanced writing. At least six credits must be in literature prior to 1800.

English Literature

- 319 Age of Dryden and Pope
- 320 Age of Johnson
- 321 Romantic Literature
- 322 Victorian Poetry
- 323 Twentieth Century British Literature
- 335 Glories of the English Renaissance
- 401 Shakespeare
- 402 Chaucer
- 403 Milton
- 409 Medieval Studies
- 415 English Novel, Eighteenth Century
- 416 English Novel, Nineteenth Century
- 418 Intellectual Controversies in Victorian Culture
- 423 English Drama, 900–1642
- 424 Restoration and Eighteenth Century Drama
- 441 Renaissance Literature
- 442 Seventeenth Century Literature

American Literature

- 313 Southern Literature
- 314/AAS 314 Black American Writers
- 371 American Literature: Colonial and Federal
- 372 American Literature: The American Renaissance
- 373 American Literature: Realism and Naturalism
- 374 American Literature: Early Twentieth Century
- 375 American Literature: Contemporary
- 414 American Novel
- AMS 394 Perspectives in American Studies

Comparative Literature³

- 315 The Modern Novel
- 316 Modern Poetry
- 317 Modern Drama
- 318 Contemporary Poetry
- 361/RST 361 Bible as Literature
- 363/AAS 363 African Literature
- 363/AAS 365 Caribbean Literature
- 367 Eastern Thought in Western Literature
- 381 Fiction into Film
- 384 Women Writers
- 386 Introduction to Folklore
- 390 Studies in Satire
- 407 Medieval Epic and Romance
- 421 Comparative Literature I
- 422 Comparative Literature II
- FLT 301 Early Chinese Literature
- FLT 302 Revolution and Erotic Life in Chinese Literature
- FLT 311 The Humanist Quest in French Literature
- FLT 312 Revolt and Renewal in Modern French Literature
- FLT 321 Early German Literature
- FLT 322 Modern German Literature

Linguistics, Criticism, and Advanced Writing

- 302 Legal Writing
- 304 Advanced Composition
- 305 Creative Writing: Genres
- 307/EDU 307 Teaching Writing Skills
- 327/BUS 327 Business and Technical Report Writing

³No more than six credits in literature in English translation taught by the Department of Foreign Languages may be applied toward the English major.

350 Approaches to Literature
 426, 427/THE 426, 427 Playwriting
 429 Form and Theory of Poetry
 430 Form and Theory of Fiction
 435, 436 Creative Writing: Poetry
 437, 438 Creative Writing: Fiction
 446 Nonstandard Urban Dialects
 449 Introduction to Linguistics
 450 Transformational Grammar
 451 History of the English Language
 453/LIN 453 Introduction to Modern Rhetoric
 552 Teaching English as a Second Language

Minor Requirements—General

A student majoring in English may pursue a minor in writing, but not an English minor.

Minor in English. The minor in English shall consist of 18 credits in upper-level (300-400) English courses, including at least 3 credits from each of the following areas: 1) English literature; 2) American literature; 3) linguistics, criticism, and advanced writing; and 4) comparative literature. Three credits may be taken in foreign literature in English translation (FLT) and three in independent study; ENG 300 Practical Writing Workshop will not count towards the minor.

Minor in Writing. The minor in writing shall consist of 18 credits in upper-level (300-400) writing courses. Students in the minor are required to take ENG 304 Advanced Composition, a course in rhetorical theory and practice. The other 15 credits may come from courses taken in the following additional areas; (1) creative writing (Eng 305, 426, 427, 435, 436, 437, 438); (2) business and technical writing (ENG 302, BUS 325, BUS/ENG 327). Students may not offer more than nine credits in creative writing toward the minor.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in English. A full description of the program appears on page 281 of the *Bulletin*.

Bachelor of Science in Secondary Education.

The Bachelor of Science curriculum with a teaching major in English requires a minimum of 124 credits including at least 39 credits in English. For the B.S. program in English education, see the listings of the Division of Teacher Education, School of Education.

MINOR AND CERTIFICATE IN ENVIRONMENTAL STUDIES (ENS)

DAVID W. HARTMAN

Coordinator

Faculty affiliated with the Environmental Studies Program are

Charles Blem (Biology)	James Gates (Biology)
Robert Fisher (Biology)	Julie Honnold (Sociology and Anthropology)
David Hartman (Sociology and Anthropology)	John Mandeli (Mathematical Sciences)
Marijean Hawthorne (History and Geography)	Lynn D. Nelson (Sociology and Anthropology)
Husain Mustafa (Political Science)	Mark Overvold (Philosophy and Religious Studies)
John Pagels (Biology)	Keith Ready (Recreation, Parks, and Tourism)
Robert Rugg (Urban Studies and Planning)	Leonard Smock (Biology)
Peter Schultz (Urban Studies and Planning)	Ann Woodlief (English)
Stuart J. Silvers (Chemistry)	
Billy Sloop (Physics)	

Environmental crises and discussion of environmental issues are central features of modern industrial societies. Continuing technological development and economic growth demand increased public understanding of environmental constraints and the effects of human activity on the environment. When environmental questions are explored in depth, scientific knowledge, policy considerations, and ethical issues are necessarily joined. The curriculum in environmental studies is structured to provide a multidisciplinary introduction to biophysical and social factors which affect the quality of life on earth.

The minor and the certificate programs seek to furnish both broad and specific educational benefits. The minor in environmental studies provides an overview of the field which offers an intrinsically interesting way for many students to organize elective course work while gaining knowledge important to life in the contemporary world. When combined with an appropriate major, an environmental studies minor can be useful to students planning careers in any area concerned with environmental processes and problems. The environmental studies certificate can help prepare students for work in such fields as industrial pollution control, municipal water

treatment, environmental planning and analysis, biological monitoring, and science writing and reporting. The minor and the certificate programs should also be valuable to those who expect to study at the graduate level in such concentrations as ecology and environmental systems.

The minor in environmental studies shall consist of 21 credits, 18 of which must be outside the student's major department. A minimum of 12 credits must be taken at the upper level (300-400). Students minoring in environmental studies must also complete STA 213 Introduction to Statistics or CSE 242 Methods of Community Analysis. Required and approved courses for the minor are as follows:

Required Courses:

ENS 490 Seminar in Environmental Studies
BIO 315 Man and Environment

or⁴

BIO 317 Ecology

at least one of the following five courses:

ECO 308 Economic Geography
GEO 102 Introduction to Cultural Geography
SOC 355 Natural Resources and Society
USP 331 Environmental Systems

Additional Approved Courses:

At least one natural science course and at least one social science course must be taken from the following list:⁵

BIO 307 Aquatic Ecology
BIO 332 Environmental Pollution
BIO 432 Biology of Polluted Waters
BIO 431 Introduction to Marine Biology
BIO 514 Advanced Freshwater Ecology
BIO 518 Plant Ecology
EAS 411 Oceanography
ENS 491 Topics in Environmental Studies
ENS 493 Environmental Studies Internship
GEO 203, 204 Physical Geography
GEO 311/ANT 311, 312 History of Human Settlement
PHY 105 Physical Geology
PHY 315 Energy and the Environment
POS 311 Politics of the Environment
REC 331 Recreation Site Selection and Analysis
USP 302 Land Use Capability
USP 332 Environmental Management
USP 333 Energy Conservation and Planning
USP 415 Air Photo and Remote Sensor Interpretations

Approved Laboratory Credits:

BIO L317 Ecology Laboratory
GEO L203, L204 Physical Geography Laboratory
REC L331 Recreation Site Selection and Analysis Laboratory

⁴Students may not take both BIO 315 and BIO 317 for environmental studies credit.

⁵Selected topics courses offered by various departments may also be approved.

Certificate in Environmental Studies

A certificate in environmental studies will be awarded to students who complete the requirements for a minor in environmental studies, an additional nine credits of approved upper-level environmental studies course work, and one of the following four courses in applications of statistics: PSY 214, SOC 214, STA 214, or STA 543. Courses may be counted toward both a student's major and the environmental studies certificate. A 2.0 GPA must be earned in the certificate courses.

FOREIGN LANGUAGES

PAUL F. DVORAK

Chairman of the Department

William J. Beck

Manuel Bejar

John C. Birmingham, Jr.

Robert Godwin-Jones

Nancy Mustafa

Cecile E. Noble

Margaret T. Peischl

Robert L. Sims

Kenneth A. Stackhouse

Alice R. Todd

Part-Time—

Antonio Masullo

Besides offering the student a liberal education in the humanities, the Bachelor of Arts degree program in foreign languages prepares the student for areas in which knowledge of foreign literature, languages and/or literature is an important career adjunct, and for graduate study in foreign language, or comparative literature. In addition, formal preparation for the teaching of French, German, and Spanish on the secondary level is available.

The Department of Foreign Languages offers the following degree programs:

1. Bachelor of Arts in foreign languages with a track in French, German, Spanish, or comparative literature. The VCU transcript will indicate the appropriate track.
2. Bachelor of Science with a teaching major in French, German, or Spanish conferred through the School of Education.

Minors in French, German, and Spanish, and a track in comparative literature as well as courses in Chinese, classical Greek, Italian, Latin, and Russian are also offered.

Freshman admitted to the College of Humanities and Sciences who wish to continue study of their high school language must take a placement test. Students transferring from other colleges and universities with advanced placement or advanced standing in foreign languages will receive credits as granted by the institution from which they are transferring. Transfer students who have not begun language study at the col-

legiate level and who wish to continue study of their high school language must take the placement test. Consult the specific language requirement of the Bachelor of Arts or Bachelor of Science degree.

The Department of Foreign Languages also offers courses in literature in English translation. While these courses do not satisfy the normal language requirements for the B.A. or B.S. degrees, they are offered to both language majors and others interested in such classes. A complete listing will be found under the section entitled Foreign Literatures in English Translation (FLT). Courses in comparative literature (CML) and European culture (EUC) are also available.

Study Abroad Opportunities

VCU has an active study abroad program for students interested in living and studying abroad during the summer. These programs offer students opportunities to immerse themselves in the language, culture, and civilization of the countries they visit. The Department of Foreign Languages normally offers summer study abroad programs in Paris (France), Klagenfurt (Austria), Salamanca (Spain), and Perugia (Italy).

VCU is also a member of ISEP, the International Student Exchange Program, which offers a junior year abroad at one of 40 universities in Africa, the Middle East, Asia, Austral-Asia, the British Isles, Canada, Western Europe, and Latin America.

For more information on all study abroad programs, please contact the International Studies Office in the Division of Continuing Studies and Public Service, (804) 786-0342.

Degree Requirements

Bachelor of Arts in Foreign Languages With A Track In French. The foreign languages degree program with a track in French requires a minimum of 124 credits including 30-36 credits toward the track in upper-level (300-400) courses.

Along with the general requirements of the College of Humanities and Sciences for the B.A. degree and the Academic Campus requirements, students majoring in French are required to take the following core courses: French 303 Advanced Grammar and Writing, 305 French Conversation, and either 307 French Civilization or 311 French through the Media.

The track in French offers three options:

1. Literature Option. Students who elect this option must complete the core requirements and also French 301, 302 (Survey of Literature), 304 (Advanced Grammar and Writing), and 12 credits in French at the 400 level. While students in this option are not required to take another foreign language, they are strongly urged to take two or more years of a second language.

2. Area Studies Option. In addition to the core curriculum, students must take 12 credits in French at the 300-400 levels. The remaining 15 credits will be chosen from the following courses:

Anthropology: 350, Peoples and Cultures of the World, 360 Archaeology of the Non-Western World (when topic is applicable)

Art History: 310 Medieval Art and Architecture; 325 Nineteenth Century Art and Architecture in Europe; 330 Twentieth Century Art and Architecture; 413 Gothic Art; 420 The Baroque in Northern Europe; 421 The Baroque in Southern Europe; 423 Rococo and Other Eighteenth Century Art; 425, 426 Neoclassicism, Romanticism, and Realism, Impressionism through Fin-de-Siecle; 430 Modern Painting; 432 The Origins of Modernism: 1880-1930

European Cultures/Humanities: 305 Aspects of French Culture

Foreign Literature in English Translation: 311 The Humanist Quest in French Literature, 312 Revolt and Renewal in Modern French Literature, 391 (French) French: any literature course

Geography: 334 Regional Geography of (when topic is applicable)

History: 307 The High Middle Ages; 308 Europe in Renaissance; 311 The Zenith of European Power, 1815-1914; 315, 316 History of France; 336 Modern European Intellectual History; 337 The Origins of Modernism, 1880-1930; 391 Topics in History (when topic is applicable)

Philosophy: 326 Existentialism; 421, 422 Aesthetics
Political Science: 353 Government and Politics of Western Europe, 362 International Organizations and Institutions

Theatre Arts: 404 History of Dramatic Literature

3. Preprofessional Option. In addition to the core curriculum, students must take French 301, 302 Survey of Literature, and 314 Commercial French. The remaining 12 credits will be chosen from the following courses:

Business: 471 International Marketing or 418 International Management

Economics: 308 Economic Geography, 320 Economic History of Europe, 329 International Economics
History: 315, 316 History of France

Political Science: 353 Government and Politics of Western Europe

In order to better prepare students in this option, the department urges the election of as many of the following courses as possible:

Business: 203-204 Introduction to Accounting; 260 Information Systems Concepts; 308 Introduction to

Marketing; 309 Marketing in the Changing World; 319 Organizational Behavior; 323 Legal Environment of Business

Economics: 201-202 Principles of Economics

Bachelor Of Arts In Foreign Languages With A Track In German. The foreign languages degree program with a track in German requires a minimum of 124 credits including 30-36 credits toward the major in upper-level (300-400) courses.

Along with the general education requirements for a B.A. degree in the College of Humanities and Sciences and the Academic Campus requirements, students majoring in German are required to take the following core courses: German 303, 304 Advanced Grammar and Writing, 305 German Conversation, 307 German Civilization, and 311 German Through the Media (15 credits).

The track in German offers three options.

1. Literature Option. Students who elect this option must complete the core requirements and must take German 301, 302 Survey of Literature (six credits) plus nine more credits from the following list:

German: 416 Age of Goethe, 417 Literature of the Nineteenth Century, 420 Literature of the Early Twentieth Century, 421 Modern Literature, 491 Topics in German, 492 Independent Study

While students in this option are not required to do so, they are strongly urged to take two or more years of a second language.

2. Area Studies Option. In addition to the core courses, students must take six additional credits from the courses listed above under 1. The remaining 15 credits will be chosen from three of the following areas:

Art History: 310 Medieval Art and Architecture; 316 Northern Renaissance Art and Architecture; 325 Nineteenth Century Art and Architecture in Europe; 330 Twentieth Century Art and Architecture; 414 Studies in Medieval Art and Architecture; 421 The Baroque in Southern Europe; 429 Studies in Nineteenth Century Art; 430 Modern Painting; ARH 432/HIS 337 The Origins of Modernism, 1880-1930

English: 552 Teaching English as a Second Language
European Cultures: 307 Aspects of German Culture
Foreign Literature in English Translation: 321 Early German Literature, 322 Modern German Literature, 391 Topics in Foreign Literature (when topic is applicable)
German: Any literature course (see list above); 314 Commercial German

History: 306 The Early Middle Ages; 307/RST 308 The High Middle Ages; 308 Europe in Renaissance; 309/RST 309 The Reformation; 310 Europe in Absolutism and Enlightenment, 1648-1815; 311 The Zenith of European Power, 1815-1914; 312 The Age of Total War: Europe, 1914-1945; 313 Post-War Europe, 1945 to the Present;

317, 318 History of Germany; 324 The Holocaust; 331 Nazi Germany; 337/ARH 432 The Origins of Modernism, 1880-1930

Music History: 421-422 Survey of Music History

Philosophy: 326/RST 326 Existentialism

Political Science: 352 Government and Politics of Western Europe, 362 International Organizations and Institutions

Psychology: 451 History and Systems of Psychology

Other courses by special request and approval

3. Preprofessional Option. In addition to the core courses, students must take 314 Commercial German, and three additional credits from the list of courses under 1. The remaining 15 credits will be chosen from the following courses:

Business: 471 International Marketing or 418 International Management

Economics: 308 Economic Geography, 320/HIS 335 Economic History of Europe, 329 International Economics

History: 317-318 History of Germany

Political Science: 352 Government and Politics of Western Europe

In order to better prepare students enrolled in this option, the department urges the election of as many of the following courses as possible:

Business: 203-204 Introduction to Accounting, 260 Information Systems Concepts, 308 Introduction to Marketing, 309 Marketing in the Changing World, 319 Organizational Behavior, 323 Legal Environment of Business
Economics: 201-202 Principles of Economics

Bachelor Of Arts In Foreign Languages With A Track In Spanish. The foreign languages degree program with a track in Spanish requires a minimum of 124 credits, including 30-36 credits towards the major in upper-level (300-400) courses.

Along with the general education requirements for the B.A. degree in the College of Humanities and Sciences and Academic Campus requirements, students majoring in Spanish are required to take the following core courses: 305 Spanish Conversation, plus nine credits from among the following courses: Spanish 303, 304 Advanced Grammar and Writing, 306 Spanish Linguistics, 307 Hispanic Civilization, and 311 Spanish Through the Media.

The track in Spanish offers three options:

1. Literature Option. Students who elect this option must complete the core requirements, and take three of the following: Spanish 301, 302 (Survey of Literature), 321 or 322 (Survey of the Literature of Spanish America), plus nine more credits in literature in Spanish. While students in this option are not required to do so, they are

strongly urged to take two or more years of a second language.

2. Area Studies Option. In addition to the core courses, students must take nine credits in Spanish at the 300-400 levels. The remaining 15 credits will be chosen from among three of the following areas:

Anthropology: 350 Peoples and Cultures of the World, 360 Archaeology of the Non-Western World, 447 Language and Culture (when topic applicable)
 Art History: 421 The Baroque in Southern Europe
 Comparative Literature: 485 Seminar in Comparative Literature
 Economics: 315 Economic Development
 English: 552 Teaching English as a Second Language
 Foreign Literature in English Translation: 391 Topics in FLT (when topic applicable)
 Geography: 334 Regional Geography of _____ (when topic applicable)
 History: 323 History of Spain and Portugal, 384 Latin America and World Affairs, 385 History of Mexico, 386 History of Brazil, 391 Topics in History (when topic applicable)
 Political Science: 353 Government and Politics of Western Europe, 361 Principles and Practices of International Relations, 362 International Organizations and Institutions, 452 Seminar in Third World Politics, 454 Seminar in Comparative Communism, 468 Seminar in Comparative Foreign Policy
 Spanish: any literature course

3. Preprofessional Option. In addition to the core courses, students must take 314 Commercial Spanish, plus six credits in Spanish at the 300-400 levels. The remaining 12 credits will be chosen from either A, B, or C; necessary prerequisites must be met:

- A. Business: 471 International Marketing or 418 International Management
 Economics: 308 Economic Geography, 320 Economic History of Europe, 329 International Economics
 History: 323 History of Spain and Portugal, 384 Latin America and World Affairs, 385 History of Mexico, 386 History of Brazil, 391 Topics in History (when topic applicable)
 Political Science: 352 Government and Politics of Western Europe, 362 International Organizations and Institutions, 452 Seminar in Third World Politics, 454 Seminar in Comparative Communism, 468 Seminar in Comparative Foreign Policy

In order to better prepare students enrolled in this option, the department urges the election of as many of the following courses as possible.

- Business: 203-204 Introduction to Accounting, 308 Introduction to Marketing, 309 Marketing in the Changing World, 319 Organizational Behavior, 323 Legal Environment of Business
- B. Anthropology: 369 The Culture of Cities
 Community Services: 315 The Evolution of American Cities, 316 Urban Life in Modern America

History: 384 Latin America and World Affairs, 385 History of Mexico, 386 History of Brazil, 391 Topics in History (when topic applicable)
 Political Science: 331 Public Administration
 Sociology: 322 Minority Groups in the United States, 327 Urban Sociology

In order to better prepare students enrolled in this option, the department urges the election of as many of the following courses as possible.

- Administration of Justice and Public Safety: 251
 Introduction to Concepts of Public Safety, 463
 Comparative Criminal Justice Systems
 Education: 453 Teaching Secondary School Foreign Languages
 Recreation: 261 Recreation in Modern Society
 Rehabilitation Services: 201 Introduction to Rehabilitation Services
 Urban Studies: 413 Policy Implementation
 Sociology: 101 General Sociology, 200 The Community
- C. Social Work: 311 Social Discrimination, 321 Development of Social Welfare
 Sociology: 322 Minority Groups in the United States

In order to better prepare students enrolled in this option, the department urges the election of as many of the following courses as possible.

History: 384 Latin America and World Affairs
 Psychology: 304 Developmental Psychology
 Social Work: 313 Person in Society
 Sociology: 101 General sociology, 304 The Family, 305 Sociology of the Black Family, 327 Urban Sociology, 446 Sociology of Mental Illness

Bachelor Of Arts In Foreign Languages With A Track In Comparative Literature. The foreign languages degree program with a track in comparative literature requires a minimum of 124 credits, including 30 credits towards the major in upper-level (300-400) courses.

Along with the general education requirements of the College of Humanities and Sciences for the B.A. degree and the Academic Campus requirements, students in the comparative literature track are required to take the following core courses (six credits): CML 301 Introduction to Comparative Literature and CML 485 Seminar in Comparative Literature. (With permission of the comparative literature advisor, ENG 350 Approaches to Literature may be substituted for CML 301.)

In addition to the above core courses, students will complete the major by taking:

A. 12 upper-level credits in one of the following national literatures: French, German, Spanish/Latin American. These must include the appro-

priate 301-302 Survey of Literature, or 321-322 Survey of the Literature of Spanish America sequence and two other literature courses in the original language.

B. Six upper-level credits in a second national literature, chosen from the following: American, Chinese, English, French, German, Greek, or Spanish. Courses may be either in the original language or in English translation (FLT).

C. Six upper-level credits in comparative literature courses which include more than one national literature. The following courses may be used to fulfill this requirement:

Comparative Literature: 391 Topics in Comparative Literature/FLT 391 Topics in Foreign Literature in English Translation

English: 315 The Modern Novel, 363 African Literature, 365 Caribbean Literature, 367 Eastern Thought in Western Literature, 386 Introduction to Folklore, 407 Medieval Epic and Romance, 421, 422 Comparative Literature Theatre: 403, 404 History of Dramatic Literature, 423, 424 Modern Drama

The following courses may be used to fulfill the requirements only with the permission of the comparative literature advisor:

English: 316 Modern Poetry, 317 Modern Drama, 318 Contemporary Poetry, 361 The Bible as Literature, 381 Fiction into Film, 390 Studies in Satire, 395 Topics in Literature, 407 Medieval Studies, 491 Topics in Literature, 492 Independent Study
Foreign Literature in English Translation: 311 The Humanist Quest in French Literature, 312 Revolt and Renewal in Modern French Literature, 391 Topics in Foreign Literature in English Translation, 492 Independent Study

Minor In French, German, Or Spanish

A minor in French, German, or Spanish shall consist of at least 18 credits, distributed as follows: 201 Intermediate, and 202 Intermediate Readings or 205 Intermediate Conversation of the language in question, plus at least 12 credits at the 300 and/or 400 levels of the same language. However, students who place out of intermediate language via the placement test may not use either of these courses toward the minor, since credit is not granted by the placement test for the first two years (elementary and intermediate) of a language. Up to six credits in additional upper-level courses must be taken to complete the minor in such a case.

Bachelor Of Science In Secondary Education.

The Bachelor of Science curriculum with a teaching major in French, German and Spanish requires a minimum of 124 credits, including at least 36 credits in the language. For more infor-

mation, refer to the listings of the Division of Teacher Education, School of Education.

HISTORY AND GEOGRAPHY

PHILIP J. SCHWARZ

Chairman of the Department

Joseph W. Bendersky	Alan V. Briceland
William E. Blake, Jr.	Arthur J. Engel
Robert D. Crome	Marijean E. Hawthorne
Harold E. Greer, Jr.	Michael W. Messmer
Norrece T. Jones, Jr.	James T. Moore
Susan Estabrook Kennedy	Ted Tunnell
George E. Munro	Melvin I. Urofsky
Robert M. Talbert	

The purpose of the history curriculum is to expose the student to a multidimensional analysis of the human past. Knowledge gained through such analysis not only has the intrinsic appeal of any disciplined intellectual inquiry but also constitutes an indispensable basis for active citizenship and for critical thinking about the society in which one lives. Historical training at the undergraduate level provides access to personal and social awareness within the rich tradition of the liberal arts; it is also an ideal means of preparing the student for a wide range of careers or further professional study.

Students majoring in history have a choice of two degree programs:

1. Bachelor of Arts in history.
2. Bachelor of Science with a teaching major in history and social science conferred through the School of Education.

Other students may avail themselves of a wide range of courses with thematic, topical, national, or chronological emphases to fulfill requirements or electives in their own educational programs.

Degree Requirements

Bachelor of Arts in History. The Bachelor of Arts curriculum in history requires a minimum of 124 credits, including 30 credits in history, of which a minimum of 24 credits must be at the upper (300 and 400) level. At least six credits must be taken from the following courses: History 461-462, 483, 485, 486, 490, 493 or 498. All students in the Bachelor of Arts program must choose at least six credits in each of three geographical areas; Europe, the United States, and the Third World. With their advisors' approval, students may take up to six credits toward the history major from an approved list of courses in other departments.

Along with completion of the general education requirements of the College of Humanities and Sciences for the B.A. degree and Academic Campus requirements, approved electives may be chosen from any courses offered in the College of Humanities and Sciences and in the Schools of the Arts, Business, Community and Public Affairs, and Education.

Students should consult their advisors to create a program adapted to their particular needs and interests.

Honors in History

History majors in the B.A. program may earn a degree with honors in history. To enter this program they must have a 3.0 overall average in their work or a 3.0 average for their junior year, with at least a 3.2 average in history. Application to enter the Honors in History program must be made in the junior year. Students who complete this program successfully will graduate in the Honors in History program, and the notation will be placed on their transcripts.

Minor in History

The minor in history shall consist of at least 18 credits in upper-level (300-400) history courses. Of these 18 credits, at least 3 credits must be at the 400 level.

Minor in Geography

The geography minor shall consist of 18 credits including GEO 203, 204 Physical Geography; GEO L203, L204 Physical Geography Laboratory; GEO 207 or 208 World Regions; and GEO 311 or 312 History of Human Settlement. Six credits must be upper-level (300-400) courses. UPS 415 Air Photo and Remote Sensor Interpretation and UPS 514 Cartography and Planning Graphics may apply to the minor and are strongly recommended to students wishing to concentrate in physical geography.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in history. A full description of the program appears on page 281 of the *Bulletin*.

Bachelor of Science in Secondary Education. The Bachelor of Science curriculum with a teaching major in history/social science requires a minimum of 124 credits including at least 24

credits in history. For the B.S. program in history education, see the listings of the Division of Teacher Education, School of Education.

MINOR IN INTERNATIONAL AFFAIRS

See political science.

MASS COMMUNICATIONS

See School of Mass Communications at beginning of degree programs.

MATHEMATICAL SCIENCES

WILLIAM E. HAVER

Chairman of the Department

REUBEN W. FARLEY

Associate Chairman

JAMES A. WOOD

Director of Graduate Affairs

Richard E. Allan

John F. Berglund

James K. Deveney

David Finston

Cu D. Ha

Henry Inman

Nancy E. Jacqmin

Robert H. Johnston

John Kavanagh

Keith Miller

J. Richard Morris

Branson Murrill

Pratip N. Raychowdhury

Said Said

John F. Schmeelk

John M. Weiss

Elizabeth Yanik

James Ames IV

James Bagby

David F. Bauer

Dorothee Blum

Robert Boudreau

Chao-Kun Cheng

Benjamin Esham

William A. Glynn

Neil W. Henry

Robert E. Johnson

Peter Kiessler

C. Michael Lohr

Paul D. Minton

Lorraine M. Parker

David A. Schedler

Joseph Yanik

The purpose of the curriculum in mathematical sciences is to promote understanding of the mathematical sciences and their structures, uses, and relationships to other disciplines. To this end, the scholarly growth of the faculty and students in the mathematical sciences is nurtured through study, research, and a high standard of excellence in teaching. The curriculum provides a sound foundation for the student seeking to enter a vocation with a technological orientation and for the student who wishes to pursue graduate study in applied mathematics, computer science, mathematics, operations research, statistics, or related disciplines.

The Department of Mathematical Sciences offers a Bachelor of Science degree in math-

emational sciences with concentrations in the following tracks:

1. **Mathematical Sciences/Applied Mathematics** in which those analytical and computational techniques are studied that are needed to solve many of today's problems. These methods have classically been applied in such areas as chemistry and physics, but now also find use in many other areas.
2. **Mathematical Sciences/Computer Science** in which the mathematical foundations and the practical applications of computers are studied to provide the student with the expertise and flexibility to function effectively in this rapidly expanding discipline. This track provides a solid education in computer science while allowing the development of associated skills.
3. **Mathematical Sciences/Computing Science** in which the mathematical foundations and the practical applications of computers are studied to provide the student with the expertise and flexibility to function effectively in this rapidly expanding discipline. This track is concentrated to provide an in-depth study of several areas of computer science.
4. **Mathematical Sciences/Mathematics** in which an understanding of the power and beauty of pure mathematics, and its applications to various branches of knowledge is fostered.
5. **Mathematical Sciences/Operations Research** in which the student studies modern mathematical techniques for solving problems arising from other fields such as engineering, business, or economics.
6. **Mathematical Sciences/Statistics** in which the rationale for, and the development and applications of, appropriate mathematical models used in the investigation of both experimental and sampling problems is studied.

In addition to the above tracks, students in consultation with their advisor may design an individual study program. Such a student would receive a Bachelor of Science in mathematical sciences.

The mathematical sciences curriculum contains a required core of courses which provides a foundation for the more specialized work while furnishing an introduction to a variety of areas in the mathematical sciences.

The Department of Mathematical Sciences also offers a Bachelor of Science in secondary education with a teaching major in mathematics, conferred through the School of Education, and a Mathematical Sciences Certificate in computer science. In addition, for students in other programs, the department offers minors in computer science, mathematical sciences, and statistics. Also offered are required and elective courses

for students in other programs of study as well as for students majoring in mathematical sciences.

Inquiries about times and procedure for taking the College Algebra Competency Examination (CACE) should be addressed to the Department of Mathematical Sciences, Virginia Commonwealth University, 1015 West Main Street, Richmond, VA 23284-0001, (804) 257-1301.

Degree Requirements

Bachelor of Science In Mathematical Sciences. The Bachelor of Science curriculum requires a minimum of 124 credits, including 41 credits in courses labeled CSC, MAT, or STA. Along with the general education requirements of the College of Humanities and Sciences and the Academic Campus requirements, students majoring in any of the six concentrations are required to take core courses and specific requirements for the selected track. (With the approval of the departmental Student Credentials and Affairs Committee and their academic advisor, students may design another track.) Each of the tracks requires at least 24 credits in upper-level (300-500 level) courses. Students may choose to meet the requirements of more than one track.

On the basis of results of the Mathematics Placement Test, students may be required to take MAT 101 College Algebra or MAT 102 Trigonometry. No more than three credits in 100-level mathematical sciences courses will be applicable to the general requirements for the B.S. degree. Credit for 100-level mathematical sciences courses may not be applied toward the mathematical sciences credits required for the mathematical sciences major.

In addition to completing the mathematical sciences core requirements and the specific requirements of a track, mathematical sciences majors are required to select one of the following options:

A. Complete two of the following sequences:

1. BIO 101-102, L101, L102 General Biology and Laboratory I, II
2. CHE 101-102, L101, L102 General Chemistry and Laboratory I, II
3. PHY 207-208 University Physics or PHY 201-202 General Physics.

OR

B. Complete one of the above science sequences and complete a minor or second major in another department or program of the university.

The student may use these courses in fulfillment of the appropriate College of Humanities and Sciences general education requirements.

Core. All students majoring in the mathematical sciences are required to take

CSC 255 Structured Programming
MAT 200-201 Calculus with Analytic Geometry
MAT 211 Mathematical Structures
STA 212 Concepts of Statistics

Tracks. Students may obtain a designation on their transcript indicating that their study has emphasized one of the following tracks by completing the requirements that are listed for that track.

1. B.S. in Mathematical Sciences/Applied Mathematics.

MAT 301 Differential Equations, MAT 307 Multivariate Calculus, MAT 310 Linear Algebra, MAT 512 Complex Analysis for Applications, MAT 517-518 Methods of Applied Mathematics, and six additional upper-level credits in mathematical sciences. (MAT 302 Numerical Calculus, MAT 437 Applied Partial Differential Equations and MAT 511 Applied Linear Algebra are recommended.) Students in this track should elect at least one upper-level course in chemistry or physics. (CHE 510 Atomic and Molecular Structure is recommended.)

2. B.S. in Mathematical Sciences/Computer Science.

CSC 256 Structured Programming, CSC 301 Introduction to Discrete Structures, CSC 311 Assembler Language, CSC 312 Introduction to Operating Systems, CSC 401 Data Structures and Algorithm Analysis, CSC 403 Programming Languages, one 500-level computer science course, and six additional upper-level credits in mathematical sciences.

3. B.S. in Mathematical Sciences/Computing Science.

CSC 256 Structured Programming; CSC 301 Introduction to Discrete Structures; CSC 311 Assembler Language; CSC 312 Introduction to Operating Systems; CSC 401 Data Structures and Algorithm Analysis; CSC 403 Programming Languages; CSC 505 Computer Architecture; CSC 508 Data Base Theory; one of MAT 301 Differential Equations, MAT 310 Linear Algebra or MAT 351 Applied Abstract Algebra; nine additional credits from list Alpha and six additional credits from list Beta.

Alpha: MAT 516 Numerical Analysis II; all upper level computer science classes.

Beta: BUS 462 Control Programming; MAT 302 Numerical Calculus; MAT 515 Numerical Analysis I; STA 321 Statistical Computing.

Students in this track must elect two courses in biology, chemistry, or physics in addition to those fulfilling the general education requirements of the college.

4. B.S. in Mathematical Sciences/Mathematics.

MAT 307 Multivariate Calculus; MAT 310 Linear Algebra; MAT 501 Algebraic Structures; MAT

507-508 Analysis I, II; MAT 509 General Topology I; and six additional upper-level credits in mathematical sciences.

5. B.S. in Mathematical Sciences/Operations Research.

MAT 307 Multivariate Calculus; MAT 309 Introduction to Probability Theory; MAT 310 Linear Algebra; MAT 327 Mathematical Modeling or STA 503 Introduction to Stochastic Processes; MAT 527-528 Mathematical Foundations of Operations Research, I, II; and six additional upper-level credits in mathematical sciences.

6. B.S. in Mathematical Sciences/Statistics.

MAT 307 Multivariate Calculus, MAT 309 Introduction to Probability Theory, MAT 310 Linear Algebra, STA 543-544 Statistical Methods, two other 500-level courses in statistics, and three additional upper-level credits in mathematical sciences.

A student who meets the requirements for two of the above tracks may receive a double major unless the two tracks are computer science and computing science. To initiate a double major, the student must obtain the appropriate form from UES/Records and Registration.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in mathematical sciences. A full description of the program appears on page 281 of the *Bulletin*.

Bachelor of Science in Secondary Education (Mathematics). The Bachelor of Science curriculum with a teaching major in mathematics requires a minimum of 124 credits, including 38 credits in the mathematical sciences. For the B.S. program in mathematics education see the listings of the Division of Teacher Education, School of Education.

Minor Requirements—General

A minimum grade-point average of 2.0 must be achieved in the minor. Credit for 100-level mathematical sciences courses may not be applied toward a minor. A mathematical sciences major may not minor in the department.

Minor in Mathematical Sciences. A minor in mathematical sciences shall consist of at least 18 credits offered by the Department of Mathematical Sciences including a minimum of one semester of calculus and nine upper-level (300-500) credits. Neither STA 213 Introduction to Statistics nor any 100-level courses will be credited toward the required 18 credits. The calculus requirement may be fulfilled by MAT

200 Calculus with Analytic Geometry or MAT 112 Elements of Calculus for Behavioral, Social, and Management Sciences, although MAT 112 may not be counted toward the required 18 credits.

Minor in Computer Science. The requirements for a minor in computer science are the same as those for the minor in mathematical sciences with the restrictions that the student take CSC 255 Structured Programming and MAT 211 Mathematical Structures and that the nine credits of required upper-level (300-500) course work be earned in computer science courses.

Minor in Statistics. The requirements for a minor in statistics are the same as those for the minor in mathematical sciences with the restriction that the nine credits of required upper-level (300-500) course work be earned in statistics courses. It is strongly recommended, but not required, that students seeking a minor in statistics take MAT 211 Mathematical Structures and STA 212 Concepts of Statistics rather than STA 213 Introduction to Statistics.

Postbaccalaureate Programs in Mathematical Sciences. For students who hold bachelor's degrees in appropriate areas, the Department of Mathematical Sciences offers the following graduate degree programs:

Master of Science in Mathematical Sciences. For information about the graduate program in mathematical sciences, see the *VCU Graduate Bulletin*.

Master of Education in Mathematics Education. For information about the graduate program in mathematics education, see the *VCU Graduate Bulletin*.

For students who hold bachelor's degrees and wish to gain undergraduate preparation in an area of mathematical sciences, the following opportunities are offered:

Second Baccalaureate Degree. For information on the second baccalaureate degree see the information in Part V of this bulletin.

Mathematical Sciences Certificate in Computer Science. The Department of Mathematical Sciences offers a certification program in computer science for students who have received bachelor's degrees in other areas and wish to undertake a study of computer science. Students who gain certification through the program are well suited for many professional opportunities available in the scientific community and with government agencies. In addition the

certification process is designed to allow interested students to prepare for graduate study in computer science.

To gain certification through this program, the student is required to earn a minimum of 33 credits from courses at the 200-level or higher in the mathematical sciences. Credits toward certification can be transferred from course work completed before or after receiving the bachelor's degree. Included among the 33 credits must be the following:

- A. At least 18 credits from courses in mathematical sciences at the 300 level or higher earned at VCU after the candidate has received a bachelor's degree;
- B. Of the 18 credits listed in part A, at least 15 credits must be in computer science with at least six of these credits at the 400 level or higher; CSC 311, Assembler Language, and CSC 401, Data Structures and Algorithm Analysis are required courses for certificate students.
- C. At least nine credits in approved electives in mathematical sciences other than computer science. A calculus course must be included among these credits.

Upon successfully completing all courses in the program within a five-year period with a grade of "C" or better, and having maintained a grade-point average of 2.5 or better in the program, the student will be awarded the Mathematical Sciences Certificate in Computer Science. Successful completion of a certificate program does not guarantee admission to the Master's Degree Program in mathematical sciences.

Students seeking to enter the certificate program should contact the Department of Mathematical Sciences for information on admission procedures.

OPERATIONS RESEARCH

The B.S. in mathematical sciences/operations research is offered by the Department of Mathematical Sciences. See Mathematical Sciences.

MILITARY SCIENCE

LIEUTENANT COLONEL C. FRANK BROOME

Chairman of the Department

Major Paul W. Parrott

SGM Horace Suber

Major Irvin Kettler

SFC Robert Hayes

The purpose of the military science curriculum is to teach the principles of management and leadership which provide a foundation for civilian or military careers. Graduates are eligible for

appointment as commissioned officers in the United States Army Reserves. Qualified seniors may apply for commissions in the Regular Army.

Scholarships. Any student may compete for Army scholarships.

Courses. In the general military science curriculum, the first two years constitute the basic course and the last two years the advanced course. All courses, except the basic and advanced summer camps, carry academic credit. There is no army service commitment for basic course students, nor is there any obligation to enroll for successive offerings. Basic military courses are restricted to freshmen and sophomores. Advanced standing may be granted to veterans, junior ROTC graduates, or members of the Reserves/National Guard after review of academic records and verification of ROTC/academic alignment by the department chairman. Compression of courses in certain cases may be approved by the chairman of the department. Students who enroll in the ROTC program must be approved by the department chairman. Advanced course students must meet certain academic and physical criteria. Advanced course students receive a monthly subsistence of \$100.

Uniforms and Equipment. All uniforms and equipment are furnished by the U.S. government without cost to the individual.

Upper-Level Credit Limitation for College of Humanities and Sciences Students. For students in the College of Humanities and Sciences, only three of the seven required 300-level military science credits may be applied toward the university 45 upper-level credit requirement.

PHILOSOPHY AND RELIGIOUS STUDIES

ROBERT B. REDMON, JR.

Chairman of the Department

Charlotte R. Brown

Clifford W. Edwards

John Heil

Mark C. Overvold

Robert M. Talbert

Affiliate—Jack D. Spiro

Earle J. Coleman

Thomas O. Hall, Jr.

James E. Lindsey, Jr.

Glenn R. Pratt

The department of Philosophy and Religious Studies offers two distinct undergraduate degree

programs:

1. Bachelor of Arts in Philosophy;

2. Bachelor of Arts in Religious Studies.

The department offers, as well, elective courses for other programs of study.

Philosophy aims at a deeper understanding of matters that most concern us. Philosophical questions crop up in science, religion, art, morality, politics, medicine, and in everyday life. Students enrolled in philosophy courses are encouraged to think seriously about fundamental issues in all these domains and to formulate coherent and well-grounded points of view. Because of its extensive use of critical, analytical reasoning, philosophy equips those who study it for work in law, business, medicine, and other fields that require careful thought and the clear expression of ideas.

Courses in religious studies enable one to study religion as a major aspect of human culture, along with other disciplines, such as the liberal and fine arts and the sciences. The student planning a church-related vocation is provided the opportunity to begin academic preparation with an objective and descriptive study of religion.

In addition, the department offers elective courses for other programs of study as well as courses for the student majoring in philosophy.

Degree Requirements

Bachelor of Arts in Philosophy. The Bachelor of Arts curriculum in philosophy requires a minimum of 124 credits, including 33 credits in philosophy courses. Majors in philosophy are required to take the following courses: PHI 103, 104 Introduction to the History of Philosophy; PHI 222 Formal Logic; PHI 327 Ethical Theory; at least one of PHI 301, 302, 303 (the department regards these as core courses and majors are encouraged to enroll in all three); and at least one semester of PHI 491 Topics in Philosophy.

Students must also fulfill the general education requirements of the College of Humanities and Sciences for the B.A. degree and Academic Campus requirements.

Bachelor of Arts in Religious Studies. The Bachelor of Arts curriculum in religious studies requires a minimum of 124 credits, including 30 credits in religious studies courses or in courses listed below as acceptable for religious studies credit.

The student majoring in religious studies is required to take the following courses: RST 101

Introduction to Religion; RST 301, 302 Old Testament and New Testament or RST 311, 312 Religions of the World; RST/PHI 430 Philosophy of Religion; and RST 490 Seminar in Religious Studies. Courses acceptable for religious studies credit within the required 30 credits include all courses designated as religious studies (RST) and the following: ANT 425 Religion, Magic, and Witchcraft and PSY 405 Humanistic Psychology. Up to six credits in Hebrew, Greek, Arabic, or Chinese language courses may be accepted within the required 30 credits of the program if approved by the department as integral to an individual's major program.

Students must fulfill the general education requirements of the College of Humanities and Sciences for the B.A. degree and Academic Campus requirements.

Minor Requirements—General

Minor in Philosophy. The philosophy minor shall consist of 18 credits, including at least nine credits in upper-level (300-400) courses, and including either PHI 103 or 104.

Minor in Philosophy of Law. The minor in philosophy of law shall consist of 18 credits, including PHI 211 Ethics; PHI 327 Ethical Theory; PHI 335 Social and Political Philosophy; PHI 320 Philosophy of Law and two courses from the following: POS 341, 342 History of Political Thought; POS 313, 314 American Constitutional Law; and HIS 369, 370 American Constitutional and Legal Development.

Minor in Religious Studies. The minor in religious studies shall consist of 18 credits in RST courses, including at least nine credits in upper level (300-400) courses.

Minor in Judaic Studies.

Jack D. Spiro, Director

The minor in Judaic studies shall consist of 18 credits chosen from among the following: RST 301 Introduction to the Old Testament; RST 303 Intertestamental Literature and Thought; RST 304 Development of Judaic Thought; RST 305 Hebrew Prophets; RST 312 Religions of the World; HIS 302/RST 316 The Ancient Near East; RST 321 Dead Sea Scrolls; HIS 324 The Holocaust; HIS 325, 326 History of the Jewish People; and other courses, approved by the director of Judaic studies, which may be developed.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in philosophy. A full description of the program appears on page 281 of the *Bulletin*.

PHYSICS

ROBERT H. GOWDY

Chairman of the Department

Horst Armbruster

Puru Jena

Shiv N. Khanna

Bijan K. Rao

John G. Huber

V. Adam Niculescu

Billy W. Sloope

Elske v. P. Smith

Part-time

Paul K. Knappenberger

The curriculum in physics can be used to meet a number of career objectives. One can prepare for

1. a technical career in physics or allied area.
2. graduate study in physics or a related area.
3. graduate studies or a profession in areas such as business, medical science, environmental science, law, or science writing.
4. the teaching of physics in secondary schools.
5. a career in engineering through either the dual-degree or the pre-engineering program.

The Department of Physics offers four undergraduate degree programs:

1. the Bachelor of Science in physics.
2. the dual physics/engineering program.
3. the accelerated BS/MS physics program.
4. the Bachelor of Science with a teaching major in physics, conferred through the School of Education.

The dual physics-engineering degree program is conducted in conjunction with Auburn University, Auburn, Alabama; George Washington University, Washington, DC; and Old Dominion University, Norfolk, Virginia. In this program, the student who satisfactorily completes a specified three-year course sequence at VCU would normally be accepted into one of several selected engineering programs at any one of the above three universities. Upon completion of the requirements for a Bachelor of Science in engineering at the cooperating university, the student also receives a Bachelor of Science in physics from VCU.

The person interested in preparing for studies in engineering but not desiring to enter the dual-degree program should see the pre-engineering program.

In addition, the department offers required

and elective courses for students in other programs of study as well as for students majoring in physics.

Master of Science in Physics/Applied Physics. For information about the graduate program in physics/applied physics, see the *VCU Graduate Bulletin*.

Degree Requirements

Bachelor of Science in Physics. The Bachelor of Science curriculum in physics requires a minimum of 124 credits, including 35 credits in physics, with a minimum of 26 credits in upper-level courses, at least six of which must be at the 400 or 500 level. In addition to the PHY courses required for the Bachelor of Science degree in physics, the following courses are required and the indicated sequence is recommended. These courses may be used in fulfillment of appropriate College of Humanities and Sciences general education requirements and Academic Campus requirements.

Freshman Year. MAT 200-201 Calculus with Analytic Geometry I, II; PHY 207-208 University Physics I, II; CHE 101-102, L101-102 General Chemistry and Laboratory or BIO 101-102, L101-102 General Biology and Laboratory. (MAT 101-102 College Algebra and Trigonometry may be required prior to MAT 200 depending upon the results of the Mathematics Placement Test. In this case, PHY 207 will be postponed one or two semesters.)

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 301, 302 Classical Mechanics I and II; PHY 320 Introduction to Modern Physics; and PHY L320 Modern Physics Laboratory 1.

Junior Year. PHY 350 Advanced Laboratory; PHY 380 Modern Physics; PHY 376 Electromagnetism; and physics electives.

Senior Year. Physics electives.

Those students intending to pursue graduate studies in physics would normally be expected to take PHY 322, 340, 571, 576, and 580 as electives. Those interested in experimental physics would also normally take one or more credits in PHY 397, 492, or 550. Those students who plan to pursue technical careers in applied or engineering physics would normally be expected to take PHY 322, 331, 340, 432, 440, and one or more credits in PHY 397 or 492 as electives.

Bachelor of Science in Physics/Bachelor of

Science in Engineering Dual Degree Program. The dual-degree program in physics and engineering requires a minimum of 93 credits from VCU, including 35 credits in physics, with a minimum of 20 credits in upper-level courses. In meeting the general requirements of the College of Humanities and Sciences, CHE 101, 102, L101 and L102 General Chemistry and Laboratory must be used to meet laboratory science requirements.

General Education Requirements for Physics/Engineering Dual Degree Majors. Due to the accelerated nature of the Physics/Engineering Dual Degree Program, students need complete only 20 credits or less in Part III Human Nature, Culture, and Institutions of the general education requirements. However, in fulfilling Part III, students may present no more than 14 credits in Category 1 Civilization and Culture and no more than 8 credits in Category 2 Foreign Language (by course or placement). At least 3 and no more than 6 credits must be presented in Category 3 Human Behavior and Institutions. All other general education requirements must be completed in full. The following courses are required and the indicated sequence is recommended.

Freshman Year. MAT 200-201 Calculus with Analytic Geometry I, II; PHY 207, 208 University Physics I, II; CHE 101-102 General Chemistry, and CHE L101-L102 General Chemistry Laboratory I, II.

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 320 Introduction to Modern Physics and PHY L320 Modern Physics Laboratory; PHY 301, 302 Classical Mechanics I, II.

Junior Year. PHY 350 Advanced Laboratory; PHY 380 Modern Physics; PHY 376 Electromagnetism; 8 credits of physics electives.

Students not prepared to begin the PHY 207, 208 and MAT 200-201 sequences in their freshman year may not be able to complete the VCU degree program within a three-year period. Additional requirements placed by the cooperating engineering schools should be obtained from the dual-degree program advisor.

Minor in Physics. A minor in physics shall consist of 20 credits made up of PHY 207, 208, PHY 320, PHY L320, and 6 credits of physics electives which are applicable to the physics major.

Accelerated B.S./M.S. Physics Program. Students enrolled in the physics B.S. program

may elect to take graduate courses which will count toward the M.S. degree. Up to six hours of graduate credit may be earned without any special provisions; however, to offer more than six credits of pre-admission graduate credits toward the M.S. degree, the student must apply for admission to the accelerated B.S./M.S. program through the Physics Department Graduate Admission Committee in the junior year indicating (1) a curriculum plan for completing the physics B.S. degree within two years or its part-time equivalency and (2) which graduate courses the student intends to offer toward the physics M.S. degree. Those applying for this accelerated program should have a B average or better. Admission to the accelerated program does not imply admission to the graduate program. Application for graduate admission must be made when the B.S. degree is applied for.

Minor In Electronic Instrumentation. A minor in electronic instrumentation shall consist of a minimum of 19 credits made up of PHY 207, 208, 330, 331, 432, and three credits selected from PHY 335, 532, 535, CSC 255, 256. PHY 201-202, with MAT 200-201, will be accepted in lieu of PHY 207-208. Physics majors who desire this minor must replace any credits offered toward their major from the list PHY 335, 532, 535, CSC 255, 256.

Bachelor of Science in Physics Education. The Bachelor of Science curriculum with a teaching major in physics requires a minimum of 124 credits, including 24 credits in physics. For the B.S. program in physics education, see the listing of the Division of Teacher Education, School of Education.

POLITICAL SCIENCE

HERBERT HIRSCH

Chairman of the Department

Frank Belloni

Husain Mustafa

Nelson Wikstrom

Robert D. Holsworth

Charles Scott Keeter

Henri J. Warmenhoven

Yong S. Yim

The political science curriculum has two central objectives. First, it offers the student who prefers a broad liberal arts education a comprehensive understanding of the nature of politics and the functioning of the political process. Second, it provides a sound foundation for the student who wishes to pursue graduate study in political science or careers which require a knowledge of governance and the political process.

The Department of Political Science offers a Bachelor of Arts degree in political science.

In addition, the department offers elective courses in political science for students in other programs of study as well as for those majoring in political science.

Degree Requirements

Bachelor of Arts in Political Science. The Bachelor of Arts curriculum in political science requires a minimum of 124 credits, including 33 credits in political science.

Along with completion of the general education requirements of the College of Humanities and Sciences for the B.A. degrees and Academic Campus requirements, the student majoring in political science must complete the following courses: POS 101, 102 American Government and POS 201 Introduction to Political Science.

In fulfilling the requirement of 33 credits in political science, a major may, with the consent of his advisor, substitute three credits in a related course from one of the following university departments or programs: Afro-American studies, sociology and anthropology, history, mass communications, philosophy and religious studies, administration of justice and public safety, and social work.

Honors in Political Science

Political science majors may earn honors in political science. To enter this program, students must have a 3.0 overall grade-point average and at least a 3.3 average in political science. In addition, students must have completed 18 hours in political science before the senior year. Twelve of these hours must be completed at VCU. Application to enter the Honors in Political Science Program must be made in the second semester of the junior year.

Students will successfully complete the honors in political science when they (1) complete POS 498 Political Science Honors, with a grade of B or higher, (2) complete POS 499 Political Science Honors Project, with a grade of B or higher, and (3) graduate with a 3.0 overall and a 3.3 political science grade-point average.

Minor Requirements—General

Students majoring in political science may not minor in political science or international affairs.

Minor in Political Science. The minor in political science shall consist of 18 credits, including POS 101, 102 American Government,

POS 201 Introduction to Political Science, and at least nine credits in upper-level (300-400) courses selected in consultation with a political science advisor, excluding POS 492 Independent Study and POS 493 and 494 Internships.

Minor in International Affairs. The minor in international affairs shall consist of 18 credits including POS 202 Introduction to Comparative Government, POS 361 Principles and Practices of International Relations, and at least one additional political science course chosen in consultation with the political science department from a department-approved list. The remaining nine credits will be chosen from recommended courses in political science, history and geography, economics, business, sociology, anthropology, foreign language, and philosophy and religious studies.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in political science. A full description of the program appears on page 281 of the *Bulletin*.

Concentration in Public Management

Political science majors should take POS 331 Public Administration and POS 432 Public Bureaucracy as part of the 33 credits required for the political science major. To complete the concentration, students should take USP 413 Policy Implementation and USP 522 Programming and Budgeting, beyond the credits required for the political science major.

Urban Studies majors should take USP 413 Policy Implementation, USP 522 Programming and Budgeting, POS 331 Public Administration, and POS 432 Public Bureaucracy.

Minor in Public Management Requirements*

The public management minor consists of 18 upper-level credits. All students must take the following courses: POS 331 Public Administration, POS 334 Public Personnel Administration, USP 413 Policy Implementation, and USP 522 Programming and Budgeting.

In addition, two of the following electives are required: POS 429 Intergovernmental Relations, POS 432 Public Bureaucracy, or USP 512 Metropolitan and Regional Public Management.

*Courses used for the minor may not be counted for the major or a concentration.

PSYCHOLOGY

STEVEN J. DANISH

Chairman

Stephen M. Auerbach
John G. Corazzini
Marilyn T. Erickson
Donelson R. Forsyth
Stephen Harkins
Glenn R. Hawkes
Donald J. Kiesler
John M. Mahoney
Thomas V. McGovern
Barbara J. Myers
Sandra K. Olson
Joseph H. Porter
Nancy J. Spencer
Stanley R. Strong
Everett L. Worthington

Kent G. Bailey
Joseph P. Bush
Linda Dougherty
Albert D. Farrell
Robert J. Hamm
John J. Harnett
John P. Hill
Phyllis A. Hornbuckle
Thomas H. Leahey
James P. McCullough, Jr.
Iris A. Parham
Stephen B. Robbins
Lesley Slavin
Arnold L. Stolberg
Robert M. Tipton

The undergraduate curriculum in psychology reflects the discipline's three major orientations: that of a science teaching and incorporating empirical methods; that of a healing profession; and that of a philosophy, raising basic questions about the assumptions, values, and ideals of human beings and their societies.

Both the Bachelor of Science and the Bachelor of Arts degree programs in psychology incorporate these three orientations, but with different emphases and different requirements.

The purpose of the Bachelor of Science curriculum is to give students a comprehensive appreciation of psychology as a science. Through a highly structured set of requirements (core, content areas, and science courses in other disciplines), the student systematically develops understanding and skill in scientific methods of inquiry, particularly about human behavior. Students with a Bachelor of Science degree have the necessary preparation for postgraduation employment or the pursuit of graduate study.

The purpose of the Bachelor of Arts curriculum is to offer students greater flexibility in their programs of study, with a concentrated background in psychology. Students may elect to gain a breadth of psychological knowledge with a diversity of courses or to gain depth in one or two areas by more thematic selections. This opportunity for breadth or depth should be considered in light of the student's present goals for employment and possible graduate or professional training.

Master of Science and Doctor of Philosophy Programs in Psychology. For information about graduate work in psychology, see the *VCU Graduate Bulletin*.

Degree Requirements

Students should carefully review the humanities and sciences requirements for a B.A. or B.S. degree. The curricula of the B.A. and B.S. in psychology were developed in the context of these general education requirements. It is the student's responsibility to know the specific requirements of both the college and the Department of Psychology, to plan a meaningful program of study, and consult regularly with a faculty advisor.

Bachelor of Science in Psychology. The Bachelor of Science curriculum in psychology requires a minimum of 124 credits, including a minimum of 32 credits in psychology.

The student who majors in psychology is required to take six core courses in the discipline and to choose four additional courses from a selection of offerings in four content areas. To complete the minimum requirement of 32 credits in psychology, one free elective is selected from all of the department's courses.

The following six courses constitute the required core in the B.S. curriculum:

- PSY 101 Introduction to Psychology
- *PSY 220 Career Development in Psychology
- PSY 214 Applications of Statistics
- PSY 317 Experimental Methods
- PSY 318 Principles of Psychological Tests and Measurement
- PSY 451 History & Systems of Psychology
- *PSY 220 Should also be taken before or during the sophomore year.

The student must choose ONE course from each of the following FOUR content areas:

Developmental

PSY 301 Child Psychology, 302 Psychology of Adolescence, 304 Development Psychology, 306 Psychology of Adult Development.

Social/Personality

PSY 309 Personality, 321 Social Psychology, 323 Interpersonal Relations, 335 Psychology of Women, 341 Group Dynamics, 405 Humanistic Psychology.

Physiological/Learning

PSY 401 Physiological Psychology, 403 Introduction to Psycholinguistics, 406 Perception, 410 Principles of Learning and Cognition.

Self-Development/Applied Psychology

PSY 303 Effective Behavior and Contemporary Psychology, 308 Stress and its Management, 310 Industrial Psychology, 340 Introduction to the Helping Relationship, 407 Psychology of the Abnormal, 426 Child Psychopathology.

In addition to the PSY courses required for the Bachelor of Science in psychology, the student must take the following courses:

STA 213 Introduction to Statistics (Required prior to PSY 214, Applications of Statistics)

One additional course in computer science, mathematics, or statistics taught by the mathematical sciences department. If the student places high enough on the Mathematics Placement Test, MAT 101 is not required.

BIO 101-102 General Biology

BIO L101-L102 General Biology Lab

or

BIO 101-L101 General Biology and Lab, and Biology elective and Lab

SOC 101 General Sociology

ANT 103 Cultural Anthropology

One elective in Anthropology, Economics, Political Science, or Sociology.

One elective in Biology, Chemistry, or Physics.

Bachelor of Arts in Psychology. The Bachelor of Arts curriculum in psychology requires a minimum of 124 credits, including a minimum of 32 credits in psychology. PSY 101 Introduction to Psychology and PSY 220 Career Development in Psychology are the only two courses required for the B.A. degree program. The remaining 27 credits in psychology can be selected from any of the departmental offerings and should be chosen in close consultation with a faculty advisor.

Students who take the B.A. curriculum in psychology must fulfill the general education requirements of the college for the Bachelor of Arts degree.

Careers in Psychology

Students choose to major in psychology for many reasons, most often some combination of wanting to help other people and to learn the scientific principles of behavior. A major expectation for students is to receive career assistance about postgraduation alternatives for employment or graduate/professional school training. The Department of Psychology has developed specific methods to assist students with their career and educational planning.

In both the B.A. and B.S. curricula, PSY 220 Career Development in Psychology is a required course which provides an orientation to the specialty areas within our discipline and to the vocational opportunities available with a bachelor's degree and further professional training. A Careers in Psychology Office has also been established to develop special workshops and to provide individual/group counseling services for the career concerns of our undergraduate majors. Specific information is available in this office on how to choose elective courses for bachelor's-level employment in mental health services, personnel, management, corrections, re-

habilitation, health services, education, and laboratory research. PSY 493 Field Work: Human Services and PSY 494 Research Internship in Psychology are two, upper-level, elective courses, specifically designed to enhance the psychology major's career pursuits for either employment or graduate-level training. Both of these courses provide opportunities for direct, practical experience with close supervision.

Graduate School in Psychology. The Careers in Psychology Office maintains up-to-date information from the American Psychological Association and other resources on admission requirements and program offerings for a variety of graduate schools. Those students who are considering graduate school should consult their faculty advisor or the Careers in Psychology Office early in their study at VCU. Specific courses in psychology are strongly recommended for many graduate programs and careful, early planning is important. Referrals to other campus services are also made in order to help the student with other professional school options and their entrance requirements, for example, prelaw, premed, Master of Social Work, Master of Business Administration, etc.

Honors in Psychology

Psychology majors in the B.A. and B.S. programs may earn honors in psychology. To be admitted to this program, a student must apply to and be accepted by the Undergraduate Committee of the Department of Psychology. The committee will select students from among those who meet the following criteria: junior standing; a 3.0 overall grade-point average, and a 3.3 grade-point average in psychology at the end of the first half of the junior year, including transfer credits; 18 credit hours completed in psychology, including PSY 317 Experimental Methods. Transfer students should have completed at least 30 credit hours at VCU including 12 in psychology with a 3.0 overall grade-point average and a 3.3 grade-point average in psychology.

A student may graduate with honors in psychology by meeting the following criteria: completion of PSY 498-499 Honors in Psychology with a grade of "B" or better for each semester, a 3.0 overall grade-point average and a 3.3 grade-point average in psychology. Graduation with honors in psychology will be noted on the transcripts of students who successfully com-

plete the program and all other graduation requirements.

Minor in Psychology

The minor in psychology shall consist of 18 credits, including PSY 101 Introduction to Psychology, and 15 credits from psychology courses. Prerequisites for courses remain in effect as stated in the bulletin.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in psychology. A full description of the program appears on page 281 of the *Bulletin*.

RELIGIOUS STUDIES

See philosophy and religious studies.

SOCIAL SCIENCES

DAVID G. BROMLEY

Coordinator

Courses in social sciences are offered by a variety of academic departments. However, they have been grouped together as "Courses in Social Sciences" under Course Descriptions.

SOCIOLOGY AND ANTHROPOLOGY

DAVID G. BROMLEY

Chairman of the Department

JULIE A. HONNOLD

Associate Chairman

Edward E. Knipe
Joseph Marolla
Melvin Mednick
Lynn D. Nelson
Nancy Osgood⁶
Diana Scully
J. Sherwood Williams
Ann Creighton-Zollar⁶

Rutledge Dennis
David D. Franks
David Hartman⁶
Neil Henry⁶
Daniel M. Johnson
John H. McGrath
Barbara A. Munjas⁶
John J. Palen

The curriculum in sociology and anthropology seeks to ensure that each student develops a sound foundation in the basic principles, theories, and techniques of analysis in sociology and/or anthropology. Since students vary in their interests and professional aspirations, the curriculum provides them with opportunities for intellectual growth as well as career development. Finally, the curriculum seeks to allow students maximum participation

⁶Joint appointments

in developing the course of study they will pursue.

To attain these goals, the Department of Sociology and Anthropology provides diverse course offerings, including independent study and research for advanced involvement in faculty research.

The Department of Sociology and Anthropology offers both the Bachelor of Science and the Bachelor of Arts degrees. The Bachelor of Science curriculum emphasizes the scientific methods and the development of skills important in research-oriented careers. The Bachelor of Arts curriculum offers students the opportunity to pursue a liberal education consistent with their intellectual interests and career goals. Both the Bachelor of Arts and Bachelor of Science curricula will prepare students for graduate studies in sociology and anthropology.

Master of Science in Sociology and Anthropology and Doctor of Philosophy Program in Social Policy and Social Work. For information about graduate work in sociology see the *VCU Graduate Bulletin*.

Degree Requirements

Students majoring in sociology and anthropology must meet the B.A. or B.S. general education requirements of the College of Humanities and Sciences. In addition, majors are required to take PSY 101 General Psychology and strongly urged, but not specifically required, to take at least 15 credits in related fields such as mathematics, philosophy, political science, or economics as approved electives.

Bachelor of Science in Sociology and Anthropology. The Bachelor of Science curriculum in sociology and anthropology requires a minimum of 124 credits including 30 credits in sociology and anthropology, 21 of which must be in upper-level (300-400) courses.

In fulfilling the general education requirements of the College of Humanities and Sciences, students seeking a Bachelor of Science in sociology or anthropology must choose one of the following options: (1) MAT 101 College Algebra, STA 213 Introduction to Statistics and any one of the following three courses: MAT 112 Elements of Calculus; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing; (2) MAT 111 Basic Mathematics for Behavioral, Social and Management Sciences, STA 213 and any one of the following three

courses: MAT 112 Elements of Calculus; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing; (3) if a student scores high enough on the Mathematics Placement Test, the requirement may be satisfied with STA 213 and any one of the following courses: MAT 112; CSC 150 Basic Computer Concepts; or CSC 201 Introduction to Computing. Each of these options fulfills both the general education requirements as well as the departmental requirements.

The laboratory science requirement may be fulfilled by taking a two-semester sequence of an introductory laboratory science (by placement or course) to be chosen from BIO 101-102, L101-L102 General Biology and Laboratory; CHE 101-102, L101-L102 General Chemistry and Laboratory; CHE 103-104, L103-L104 Introduction to Modern Chemistry and Laboratory; PHY 101-102, L101-L102 Foundations and Frontiers of Physics and Laboratory; PHY 201-202 General Physics; PHY 207, 208 University Physics.

The student majoring in sociology and anthropology has a choice of fulfilling either a sociology or an anthropology concentration to complete the department's requirements for a major.

Sociology Concentration. A minimum of 30 credits in sociology or anthropology courses including: SOC 101 General Sociology, SOC 214 Applications of Statistics, SOC 320 Research Methods in the Social Sciences, SOC 402 Sociological Theory, ANT 103 Cultural Anthropology. At least 18 credits in this concentration must be in sociology courses.

Anthropology Concentration. A minimum of 30 credits in sociology or anthropology courses including ANT 103 Cultural Anthropology, SOC 101 General Sociology, ANT 201 The Evolution of Man and Culture. At least 18 credits in this concentration must be in anthropology courses.

The anthropology concentration beyond the required courses is primarily in the area of cultural/social anthropology and sociology. Students interested in biocultural anthropology, linguistics, or archaeology will be encouraged and guided to take courses in other departments which relate to these fields of anthropology. See advisor or department chairman for suggested courses.

Bachelor of Arts in Sociology and Anthropology. The Bachelor of Arts curriculum in sociology and anthropology requires a minimum of 124 credits, including 30 credits in sociology and anthropology, 21 of which must be in upper-level (300-400) courses. The student seeking a Bachelor of Arts degree may also choose either the concentration in sociology or anthropology as described above. Students who concentrate in sociology must take STA 213 in fulfilling their general education requirements as it is a prerequisite for SOC 320, but are not required to take SOC 214 as part of the Bachelor of Arts curriculum.

Minor Requirements—General

Students majoring in sociology and anthropology may not minor in sociology or anthropology.

Minor in Anthropology. The anthropology minor shall consist of 18 credits including ANT 103 Cultural Anthropology and ANT 104 The Evolution of Man and Culture and any four upper-level (300-400) anthropology courses, or any three upper-level (300-400) anthropology courses plus one course in history.

Minor in Sociology. The sociology minor shall consist of 18 credits including SOC 101 General Sociology and at least one of the following: SOC 318 Social Thought, SOC 340 Social Psychology, or SOC 402 Sociological Theory. A minimum of 12 credits must be taken at the upper-level (300-400). One upper-level course in anthropology may be used to fulfill the 18 credit requirement.

Cooperative Education Program

The Cooperative Education Program is available to qualifying students pursuing an undergraduate degree in sociology. A full description of the program appears on page 281 of the *Bulletin*.

Master of Science in Sociology. For information about graduate work in sociology see the *VCU Graduate Bulletin*.

Graduate Work

Other graduate programs of interest to sociology and anthropology students are the Master of Science in sociology and the doctoral programs in social policy and social work (School of Social Work) and in urban services (School of Education). See the *VCU Graduate Bulletin*.

Secondary School Teaching Certificate.

Students interested in teaching sociology in secondary schools can become certified under the School of Education approved program procedures. Consult the Division of Teacher Education section in the School of Education part of this bulletin and a faculty advisor in the social science education program for more information.

Undergraduate Topics Courses. Topics courses in both sociology and anthropology (SOC 391 and ANT 391) are an integral part of the program and provide an unusual opportunity for the advanced student. Generally these courses are restricted to a small number of students who share specialized interests in a topic which is either too advanced or too limited in its general appeal to warrant its inclusion as a regular offering. At least one such seminar is offered each semester and the topics course may be repeated to a maximum of 18 credits so long as there is no duplication of the topics.

Independent Study. These courses (SOC 492 and ANT 492) are designed for juniors and seniors capable of doing independent work on selected topics under the direction of specific faculty members. For example, if a course is not being regularly offered in some area of interest to a particular student, and if there are not enough students interested in the area to warrant the offering of a topics course, the student may, with the permission of the instructor, enroll in independent study.

Students may earn a maximum of 24 credits in departmental independent study courses, but they may not enroll for more than six credits per semester. Only majors in sociology and anthropology or related fields may enroll in these courses. All students must have completed a minimum of 12 credits in sociology or anthropology with an overall sociology-anthropology grade-point average of at least 2.7.

STATISTICS

The B.S. in Mathematical Sciences/Statistics is offered by the Department of Mathematical Sciences. A minor in statistics is also offered. See Mathematical Sciences.

PREPARATION FOR PROFESSIONAL STUDIES IN THE HEALTH SCIENCES

ARTHUR J. SEIDENBERG

Coordinator of Pre-Health Sciences Advising

The College of Humanities and Sciences provides preparatory programs for the following health science programs offered on the Medical College of Virginia Campus: medicine, dentistry, dental hygiene, health care management, medical record administration, medical technology, nuclear medicine technology, nursing, occupational therapy, pharmacy, and physical therapy. Preveterinary medicine advising is available through the biology department.

An early acceptance program has been established between the College of Humanities and Sciences and the Medical College of Virginia Campus of VCU to provide guaranteed admission to professional programs mentioned above for academically superior students. This program is only open to entering freshmen whose SAT scores are at least 1200 (1300 for early acceptance to the School of Medicine). Details are provided in the section entitled Honors Program on page 67 of this *Bulletin*.

Most of the students enrolled in a pre-health science program in the College of Humanities and Sciences will make application to one of the MCV Campus professional programs listed above. Unless informed otherwise by the student, College of Humanities and Sciences advisors help the student to prepare an academic program which will meet the requirements of the MCV Campus professional programs. However, since more qualified students apply to the MCV Campus programs than can be accommodated, students are encouraged to apply to other professional schools and to use their elective courses to meet requirements of those institutions.

In addition, students are advised to plan alternative career choices in the event that they are not accepted into a professional program. This is particularly true for students enrolled in a two-year pre-health science program. Early preparation toward meeting the requirements of the alternate choice major through judicious use of elective courses will enable the student to make a smooth transition from a pre-health science program to a baccalaureate program.

As indicated above, acceptance into a health science professional program has become more competitive in recent years due to the increase in

the number of qualified applicants. Therefore, Virginia residency may be a factor in admission to the MCV Campus health science programs. Students desiring more information about residency should consult the appropriate admissions officer on the MCV Campus.

Preparation for the Study of Medicine and Dentistry (PMD—Pre-Medicine and PDT—Pre-Dentistry)

Pre-Medical Advisory Committee: James E. Gates, Chairman

Lynn S. Bryant, Carolyn M. Conway, Ann Creighton-Zollar, Miles F. Johnson, Arthur J. Seidenberg, Stuart S. Silvers, Robert M. Talbert, Lawrence J. Winters, Ann M. Woodlief

Pre-Dental Advisors: faculty in the biology and chemistry departments

In preparation for entering these professions, leaders in medical and dental education encourage prospective students to obtain a broad background in liberal arts education including not only sciences but also humanities and social sciences. Though one is not restricted to a science curriculum for entry into medical or dental school, pursuit of course work in a science area provides a sound background for further study in medicine or dentistry. **A prospective student should check with the intended school of medicine or dentistry for its specific requirements.**

Many schools of medicine, including the School of Medicine on the MCV Campus, require a minimum of three years (90 semester hours or the equivalent) in an accredited college or university, but preference is given to candidates who will earn a baccalaureate degree prior to the beginning of medical school. The following are the courses generally required for admission to most medical schools including the School of Medicine at VCU: biological science, general chemistry, organic chemistry, English, mathematics, and physics. Other courses, such as general physiology, genetics, calculus, and behavioral sciences, though not required, are strongly recommended for the pre-medical student.

Many schools of dentistry, including the School of Dentistry on the MCV Campus, require a minimum of at least three years of liberal arts education taken in an accredited college or university. The following courses are generally

required for admission to most dental schools, including the School of Dentistry at VCU: biology, general chemistry, organic chemistry, mathematics, physics, and English. Other courses, such as those in the behavioral sciences and courses involving psychomotor skills are strongly recommended.

Programs of Study. Admission to and completion of a pre-medical or pre-dental program of studies offered by the College of Humanities and Sciences does not constitute admission to the School of Medicine or School of Dentistry of Virginia Commonwealth University; the student must make separate application to the medical or dental school of his choice at the appropriate time.

Most students entering the College of Humanities and Sciences with an interest in preparing for medical or dental school will apply as a "pre-medical" or "pre-dental" student. This classification as pre-medical or pre-dental exists to identify the student's future career interests; the student does not earn a "pre-medical" or "pre-dental" degree. As the student begins to clarify his academic interests through regular conversations with his assigned pre-medical or pre-dental advisor, the student will major in one of the regular four-year degree programs offered in the College of Humanities and Sciences, while, at the same time, completing the necessary prerequisites for application for admission to the medical or dental school of his choice.

The Bachelor of Science in biology and the Bachelor of Science in chemistry (with the proper selection of electives) programs offered at the Academic Campus of VCU provide excellent opportunities to complete the necessary prerequisites for application to a medical or dental school.

In addition, these curricula allow a student to plan a program for entry into medical or dental schools which accept students upon completion of three years of successful undergraduate work. The university will award a Bachelor of Science degree to a student who has successfully completed the first year of an accredited medical or dental school provided he has completed all the general requirements for the College of Humanities and Sciences and the requirements in his major. Successful completion of the first year of medical or dental school will be accepted as 30 credits of electives towards the student's total hours.

Preparation for the Study of Veterinary Medicine (PVT)

RUSSELL V. BROWN
Coordinator

The Bachelor of Science in chemistry and the Bachelor of Science in biology programs offered at the Academic Campus provide excellent opportunities to complete the necessary prerequisites for application to a veterinary school.

Preparation for the Study of Dental Hygiene (PDH)

JAMES E. GATES
Coordinator

Advisors: Robert C. Markham, Arthur J. Seidenberg

The curriculum in pre-dental hygiene offered by the College of Humanities and Sciences meets the minimum academic requirement for application to many professional programs, including the Bachelor of Science degree program in dental hygiene offered through the School of Dentistry on the MCV Campus. Students intending to apply to the junior and senior year professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>
ENG 101-102 Composition and Rhetoric	6
MAT 101 College Algebra	3
STA 213 Introduction to Statistics	3
CHE 101-102 General Chemistry	8
CHE L101, L102 Laboratory I, II.	2
or	
CHE 103-104 Introduction to Modern Chemistry	6
CHE L103-L104 Laboratory I, II	2
BIO 101, L101 General Biology, Laboratory I	4
BIO 205 Basic Human Anatomy	4

BIO 206 Human Physiology	4
PSY 101 General Psychology	3
SOC 101 General Sociology	3
SPE 121 Effective Speech	3
Approved Electives	<u>20-22</u>
(minimum)	60

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement test or due to placement in CHE 100 Introduction to Chemistry, needed for additional chemistry preparation, the student should add a 3-credit elective in the fall semester and plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Health Care Management (PHM)

Advisor: Arthur J. Seidenberg

The curriculum in pre-health care management offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in health care management offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>
ENG 101-102 Composition and Rhetoric	6
History	3
Government	3
PSY 101 General Psychology	3
Mathematics	3
Humanities	6
Science	8
Economics	3

BUS 203 Introduction to Accounting	3
Electives	<u>22</u>
	60

Preparation for the Study of Medical Record Administration (PMR)

Advisor: Arthur J. Seidenberg

The curriculum in pre-medical record administration offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in medical record administration offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First Year</i>		
ENG 101-102 Composition and Rhetoric	3	3
BIO 101 General Biology	3	—
BIO L101 General Biology Laboratory I	1	—
MAT 101 College Algebra	3	—
STA 213 Introduction to Statistics	—	3
SOC 101 General Sociology	3	—
SPE 121 Effective Speech	—	3
PSY 101 General Psychology	3	—
BIO 205 Basic Human Anatomy or BIO 206 Human Physiology	—	4
Elective	—	<u>3</u>
	16	16
<i>Second Year</i>		
BIO 205 Basic Human Anatomy or ... BIO 206 Human Physiology	4	—

ECO 203 Introduction to Economics...	—	3
Electives	10	11
	14	14

Preparation for the Study of Medical Technology (PMT)

Advisors: Robert G. Bass, Frederick W. Hawkrigde,
Donald D. Shillady, Billy L. Stump, Syang Y. Su

The curriculum in pre-medical technology offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in medical technology offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses. Any student who wishes to transfer to a school other than MCV must transfer to a school that will confer a degree at the completion of the fourth year.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

	Credits	
	1st Sem.	2nd Sem.
First Year		
CHE 101-102 General Chemistry	4	4
CHE L101-L102 General Chemistry Laboratory I, II	1	1
ENG 101-102 Composition and Rhetoric	3	3
MET 201 Introduction to Medical Technology	1	—
MAT 101 College Algebra or MAT 102 Trigonometry	3	—
Humanities or Social Science Electives ..	3	3
BIO 101 General Biology	—	3
BIO L101, General Biology Laboratory I	—	1
	15	15

Second Year

CHE 309 Quantitative Analysis	—	4
BIO 205 Basic Human Anatomy	4	—
BIO 206 Human Physiology	—	4
Humanities or Social Science Electives ..	12	6
	16	14

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry needed for additional chemistry preparation, the student should add BIO 101, L101, General Biology and Laboratory in the fall semester and should plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Nuclear Medicine Technology (PNM)

Advisor: Arthur J. Seidenberg

The curriculum in pre-nuclear medicine technology meets the minimum academic requirements for the Bachelor of Science degree program in clinical radiation sciences with a nuclear medicine concentration offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to a professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program on the MCV campus will be based on scholastic record, demonstrated aptitude, and interest, and a personal interview by the departmental admissions committee.

Credits	
ENG 101-102 Composition and Rhetoric	6
MAT 101 College Algebra	3
CHE 101-102 General Chemistry	8
CHE L101, L102 Laboratory I, II	2
BIO 101, L101 General Biol. Laboratory I	4
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology	4
PSY 101 General Psychology	3

PHY 201-202 General Physics	8
Approved Electives	(minimum) 18
	(minimum) 60

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry, needed for additional chemistry preparation, the student should add a 3-credit elective in the fall semester and plan to take CHE 102 and L102 in the summer.

Preparation for the Study of Nursing (PNR)

MARGARET L. MAY

Coordinator

Advisors: Leann Blem, Catherine Corson, Arthur J. Seidenberg, Gail Turner

The curriculum in pre-nursing offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in nursing offered through the School of Nursing on the MCV Campus. Students intending to apply to the professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude, and interest.

	<i>Credits</i>
ENG 101-102 Composition and Rhetoric	6
Humanities Electives	12
PSY 101 General Psychology	3
PSY 304 Developmental Psychology	3
SOC 101 General Sociology	3
SOC 304 The Family or	
SSC 303 Marriage and Family Relations	3
MAT 101 College Algebra or MAT 111 Basic	
Mathematics for Behavioral, Social and	
Management Sciences or STA 213 Introduction	
to Statistics (STA 213 preferred)	3
CHE 103-104 Introduction to Modern	
Chemistry	6

CHE L103-L104 Laboratory I, II	2
BIO 101, L101 General Biology, Laboratory	4
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology	4
BIO 209 Medical Bacteriology	4
BIO 217 Nutrition	3
	60

Preparation for the Study of Occupational Therapy (POC)

ARTHUR J. SEIDENBERG

Coordinator

Advisors: Alan V. Briceland, Robert L. Sims

The curriculum in pre-occupational therapy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in occupational therapy offered through the School of Allied Health Professions on the MCV Campus. This program is accredited by the American Occupational Therapy Association, Inc. Students intending to apply to the junior and senior year professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude, and interest. A personal interview is required as a part of the admission procedure.

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First year</i>		
ENG 101-102 Composition and		
Rhetoric	3	3
PSY 101 General Psychology	3	—
SOC 101 General Sociology	3	—
BIO 101 General Biology	3	—
BIO L101 General Biology Laboratory.	1	—
BIO 205 Basic Human Anatomy or		
BIO 206 Human Physiology	—	4
MAT 101, STA 213 College Algebra and		
Introduction to Statistics or		
STA 213 Introduction to Statistics ..	3	3
Electives	—	6
	16	16

Second Year

PSY 304 Developmental Psychology ..	3	—
PSY 407 Abnormal Psychology	3	—
Psychology Elective	—	3
BIO 205 Basic Human Anatomy or		
BIO 206 Human Physiology	4	—
Sociology elective	3	—
Electives	2-3	12
	15-16	15

These are considered minimum requirements. Students are encouraged to pursue additional study in biology, psychology, and sociology. Students are also encouraged to take mathematics and statistics courses to increase their curricular options at the end of this preparatory program.

Preparation for the Study of Pharmacy (PPH)

Advisors: Gordon A. Melson, Robert J. Moore, Raphael M. Ottenbrite, Sarah C. Rutan, Stuart J. Silvers, Albert T. Sneden, James Terner, Joseph A. Topich, Lidia M. Vallarino, Lawrence J. Winters

The curriculum in pre-pharmacy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in pharmacy offered through the School of Pharmacy on the MCV Campus. Students intending to apply to the professional program at another institution should consult the bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences does not constitute admission to the final three years of the professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the school admissions committee.

Credits

BIO 101-102 General Biology	6
BIO L101-L102 General Biology	
Laboratory I, II	2
ENG 101-102 Composition and	
Rhetoric	6
MAT 101-102 College Algebra and Trigonometry-	

MAT 102, 200 College Algebra	
and Trigonometry and Calculus	
with Analytic Geometry or	
MAT 101, 200 College Algebra and	
Calculus with Analytic Geometry	6-7
CHE 101-102 General Chemistry	8
CHE L101-L102 General Chemistry	
Laboratory I, II	2
ECO 201 Principles of Economics	3
PHY 201-202 General Physics	8
CHE 301-302 Organic Chemistry	6
CHE L301-L302 Organic Chemistry	
Laboratory I, II	4
Approved Humanities and Social	
Sciences Electives	18

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If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry needed for additional chemistry preparation, the student should add a 3-credit elective in the fall semester and should plan to take CHE 102 and L102 in the summer or following fall semester.

Also, since this program requires that the student take 17-18 credits each semester in order to finish in four semesters, the student should give strong consideration to planning some courses for the summer between freshmen and sophomore years.

Physical education credits are not acceptable in meeting the above prerequisites.

Preparation for the Study of Physical Therapy (PPT)

JACKSON E. JEFFREY

Coordinator

Advisors: Mark W. Booth, Elizabeth F. Duke, Mark C. Overvold, Arthur J. Seidenberg, Kenneth A. Stackhouse, Esther H. Vasser

The curriculum in pre-physical therapy offered by the College of Humanities and Sciences meets the minimum academic requirements for application to many professional programs, including the Bachelor of Science degree program in physical therapy offered through the School of Allied Health Professions on the MCV Campus. Students intending to apply to the junior and senior year professional program at another institution should consult that bulletin for the exact prerequisite courses.

Admission to and satisfactory completion of the following two-year preparatory program offered by the College of Humanities and Sciences

ces does not constitute admission to the junior and senior year professional program on the MCV Campus. The student must make separate application to that professional program at MCV through the Director of Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, in the fall of the year preceding the year of desired admission. Admission to the program at MCV will be determined by the departmental admissions committee. Factors that will be considered by the committee are the student's scholastic record and professional suitability. In addition, the student is expected to have acquired knowledge concerning the practice and goals of the profession of physical therapy. A personal interview is required as a part of the admissions procedure.

	<i>Credits</i>	
	<i>1st Sem.</i>	<i>2nd Sem.</i>
<i>First Year</i>		
BIO 101-102 General Biology	3	3
BIO L101, L102 General Biology Laboratory I, II	1	1
ENG 101-102 Composition and Rhetoric	3	3
CHE 101-102 General Chemistry	4	4
CHE L101, L102 General Chemistry Laboratory I, II	1	1
MAT 101-102 College Algebra and Trigonometry OR MAT 102 Trigonometry (If student takes MAT 102 Trigonometry in the first semester, it is recommended that PSY 101 General Psychology be taken in the second semester	3	3
	15	15
<i>Second Year</i>		
PHY 201-202 General Physics	4	4
PSY 101 General Psychology (if not taken in first year) or Approved Elective	3	—
Psychology elective	—	3
Social Science Electives	3	3
Approved Electives (BIO 205 Basic Human Anatomy and BIO 206 Human Physiology are strongly recommended.)	7	7
	17	17

If a student does not qualify to take CHE 101 and CHE L101 in the first semester due to a low score on the Mathematics Placement Test or due to placement in CHE 100 Introduction to Chemistry needed for additional chemistry preparation, the student should add a 3-credit elective in the fall semester and should plan to take CHE 102 and L102 in the summer.

Recommended approved electives are foreign language (Latin, French, or German), mathematics (analytic geometry, calculus, statistics), social science, biological sciences, and physical education courses such as gymnastics, tumbling, and modern dance.

It is suggested that the social science courses be selected from the following areas: adolescent psychology, anthropology, child psychology, economics, history, personality development, philosophy, psychology of adjustment, sociology, and statistics.

Program Changes Planned for Late 1980s

Physical therapy schools are preparing for changes in their entry-level programs. The new programs will lead to a Master of Science in physical therapy and will replace present Bachelor of Science entry-level programs. As currently planned, candidates for admission to the physical therapy program on the MCV Campus will be required to have a minimum of 90 semester hours credit in undergraduate study which will include required prerequisite courses. The professional program is anticipated to be a three-year program which will include instruction at both upper undergraduate and graduate levels.

A cooperative program leading to a Bachelor of Science following the first year of professional program has been approved between the Department of Biology and the Department of Physical Therapy on the MCV Campus.

Since the exact date of initiation of this program is not known at this time, interested applicants are urged to keep informed of developments by periodic contact with the Department of Biology, Virginia Commonwealth University, Box 2012, Richmond, VA 23284-0001, (804) 257-1562.

PREPARATION FOR PROFESSIONAL STUDIES IN LAW

Advisors: Husain Mustafa, Department of Political Science; Carol D. Rasic, Department of Business Administration and Management; James L. Hague, Department of Administration of Justice and Public Safety

Few law schools list specific undergraduate courses as prerequisites for admission. Thus, the student who is considering law school may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to

obtain a broad liberal arts background with emphasis on the social sciences and English. Students may find the philosophy of law minor listed under the Department of Philosophy and Religious Studies interesting.

The pre-law advisors maintain continual contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedure, or the law school admission test.

PREPARATION FOR THE STUDY OF ENGINEERING

B. W. SLOOPE
Coordinator

Students wishing to pursue a career in any of the fields of engineering should enroll in the Department of Physics. The department offers two programs: (1) pre-engineering and (2) dual physics/engineering degree program.

The pre-engineering program at VCU affords the student a broad background in science and mathematics, as well as exposure to the humanities and social sciences, before specializing in a particular area of engineering. The department will assist qualified students in transferring to accredited engineering schools upon the completion of the program.

A typical two-year program for students ready to enter directly into calculus would be as follows:

Freshman Year. CHE 101-102 General Chemistry; CHE L101-L102 General Chemistry Laboratory I, II; ENG 101-102 Composition and Rhetoric; MAT 200-201 Calculus with Analytic Geometry; PHY 207-208 University Physics I and III.

Sophomore Year. MAT 307 Multivariate Calculus; MAT 301 Differential Equations; PHY 320 Introduction to Modern Physics; CSC 201 Introduction to Computing; Humanities or Social Science Electives; Science Electives (from PHY 330 Electrical Circuits; PHY 331 Introductory Electronics; PHY 301-302 Classical Mechanics I and II; PHY 340 Introduction to Statistical Physics and Thermodynamics; PHY 376 Electromagnetism; or CSC 202 Introduction to Computing.)

Students who are interested in the chemical or biological aspects of engineering may wish to

substitute courses in these areas in lieu of some physics courses in the second year. Those interested in engineering but whose background preparation does not warrant entrance into the two-year sequence above may spread their work over three years. Students should see the pre-engineering advisor for details of their individual programs.

Dual physics/engineering degree programs are offered in cooperation with Auburn University, Old Dominion University, and George Washington University. For further details, see Department of Physics section of this bulletin.

COURSE DESCRIPTIONS

Course Numbering. 100 and 200 courses are undergraduate lower-level courses offered primarily for undergraduate students. 300 and 400 courses are undergraduate upper-level courses offered for advanced undergraduates.

A course designated with an asterisk indicates that the course is applicable to certain graduate degrees for selected graduate students. Such students must have their department and dean's approval to register for a limited number of these courses.

Courses at the 500 level are open to advanced undergraduate students with the consent of the offering department. Credit is applicable to only one degree.

COURSES IN AFRO-AMERICAN STUDIES (AAS)

103, 104 Introduction to Afro-American Studies. Semester courses; 3 lecture hours. 3-3 credits. A broad overview of the historical, social, economic, psychological, and cultural aspects of Afro-American life.

105/Sociology 105 Sociology of Racism. Semester course; 3 lecture hours. 3 credits. The course will explore the direct and indirect ways in which racial attitudes are acquired, their effect on individuals and society, and the institutional and ideological manifestations of racism as a "faith system," as exploitation, and as a form of human conflict. The central focus of interest will be on black-white relationships.

107, 108/History 105, 106 Introduction to African History. Semester courses; 3 lecture hours. 3-3 credits. An overview of African civilization from prehistory to the present, with emphasis on cultural developments as well as selected in-depth analyses of specific issues in African history. First semester: to 1800. Second semester: since 1800.

200/Anthropology 200 Urban Studies 200 African Culture. Semester course; 3 lecture hours. 3 credits. An exploration of the unique and diverse cultural heritage shared by Africans. Particular attention will be given to life styles

and work styles as these relate to knowledge, behavior, ideas, and objects.

204 Africa in Transition. Semester course; 3 lecture hours. 3 credits. Prerequisite: AAS 200 or permission of instructor. The impact of modern social change upon the traditional aspects of African life. Various aspects of social change as it applies to Africa today will be explored.

245, 246/Music History 245, 246 Introduction to Afro-American Music. Semester courses; 3 lecture hours. 3-3 credits. An introductory survey of black involvement with the development of music in America from 1607 to the present. Afro-American musical styles will be studied from many aspects including their African roots and contemporary popular expression.

303/Theatre 303 Black Theatre. Semester course; 3 lecture hours. 3 credits. A study of the major developments in the evolution of black theatre through readings and studio performances in black-related and black theatre dramaturgy.

305/Sociology 305 Sociology of the Black Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A socio-history of the development of the dynamics of the black family.

307/Religious Studies 307 Black Religion. Semester course; 3 lecture hours. 3 credits. An analysis of the role of religion in the lives of blacks with an emphasis on African religions and philosophies, the black church in America, and the roles of the various faiths, sects, and cults.

310/Economics 310 Economics and Poverty. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201-202 or 203. An analysis of the causes of income inequality, the incidence and characteristics of poverty, and the economics of public policies designed to counteract poverty.

311/Urban Studies 337 Urbanization and Blacks: A Cross-Cultural Comparison. Semester course; 3 lecture hours. 3 credits. Comparisons and evaluation of past and contemporary urbanization patterns of black people primarily in Africa and America, their current social, economic, and political problems, and the range of solutions being proposed for dealing with them.

314/English 314 Black American Writers. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101-102. An examination of the contributions of black writers in America from colonial times to the present.

315/Economics 315 Economic Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201-202. An introduction to the process of economic development including a survey of development theory and a study of the experience of both underdeveloped and developed countries. Economic policies and tools of economic planning for stimulating development will be presented.

322/Psychology 322 Personality and Behavior of the Afro-American. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101. A study of personality factors, such as motivation, ego functioning, and the socialization processes with special emphasis on living conditions of Afro-Americans.

333/Geography 333 Geography of Africa. Semester course; 3 lecture hours. 3 credits. A study of land forms,

climate, peoples, boundaries, trade, and cultural groupings of the African continent.

342/Art History 342 Afro-American Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: advanced standing. A study of the art forms produced by Americans of African origin from the seventeenth century to the present with an emphasis on contemporary trends in black art.

343/Political Science 343 Black Political Thought. Semester course; 3 lecture hours. 3 credits. An historical and sociological perspective on the political and social ideas of black thinkers from David Walker to the present.

361, 362/History 361, 362 Americans from Africa. Semester courses; 3 lecture hours. 3, 3 credits. A study of the history and culture of blacks in the United States, designed to analyze some of the most important aspects of black life and the attitudes of the dominant society within which blacks lived. The second semester emphasizes the changing status, expectations, and ideologies of black Americans in the twentieth century. First semester: to 1877; Second semester: since 1877.

363/English 363 African Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101-102. The study of African oral performances and written literatures in English with emphasis on West and South Africa.

365/English 365 Caribbean Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101-102. A survey of West Indian writings. Attention will be given to African, European, and Amerindian influences, as well as to the emergence of a West Indian literary tradition.

387/History 387 History of West Africa. Semester course; 3 lecture hours. 3 credits. A study of the transformation of West African societies from the iron age to modern, independent nation-states, with stress on the roles of reforming Islam, European economic and cultural influences, and European colonialism.

388/History 388 History of Central and East Africa. Semester course; 3 lecture hours. 3 credits. A history of the broad Bantu, Nilotic, and Cushitic middlebelt of tropical Africa from the European invasion to the present, emphasizing the factors leading to the development of modern nation-states and the problems which beset these nations today.

389/History 389 History of South Africa. Semester course; 3 lecture hours. 3 credits. A study of South Africa from prehistoric times to the present, emphasizing the pluralistic nature of the evolution of South African society and the interaction among the various communities and ethno-linguistic groups composing it.

413/Art History 350 African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. A study of the architecture, painting, sculpture, and civilizations of the major art-producing tribes of West Africa and Oceania from the thirteenth century to the present.

491 Topics in Afro-American Studies. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of nine credits; three credits may be applied to the Afro-American Studies minor. An in-depth study of specialized areas of Afro-American Studies.

492 Independent Study. Semester course; variable credit. Maximum four credits per semester. Maximum total in all

independent study courses four credits. Open generally only to students of junior and senior standing who have acquired at least 12 credits in Afro-American Studies courses. Determination of the amount of credit and permission of the instructor and coordinator must be procured prior to registration for the course.

COURSES IN AMERICAN STUDIES (AMS)

195 Richmond. 15 contact hours. 1 credit. A series of mini-courses dealing with aspects of Richmond's literary and historical importance from the city's beginning to the present.

301 Introduction to Native American Studies. Semester course; 3 lecture hours. 3 credits. An overview of the historical, social, and cultural aspects of life of the peoples native to the North American continent.

323 Social Attitudes in the Humanities. Semester course; 3 lecture hours. 3 credits. An examination of artistic and literary expressions of social attitudes and their influence on the development of the social reform movement. Focus will be on the western world, with special attention to the United States.

391 Topics in American Studies. Semester course; 3 lecture hours. 3 credits. Selected issues or problems in American civilization with materials drawn from such areas as history, the social sciences, philosophy, literature, the arts and mass communications. May be repeated once for credit.

394 Perspectives in American Studies. Semester course; 3 lecture hours. 3 credits. Prerequisite: six credits in American-related courses. An introduction to the methods, significant works, and major trends in American studies. May be taken for American literature credit by English majors. May not be used to satisfy the College of Humanities and Sciences requirements in literature.

COURSES IN ANTHROPOLOGY (ANT)

103 Cultural Anthropology. Semester course; 3 lecture hours. 3 credits. A general survey of anthropology with emphasis on learning about and from non-Western cultures.

105 Introductory Archaeology. Semester course; 3 lecture hours. 3 credits. The history, development and current trends in archaeological method and theory are illustrated with case studies from around the world.

200/Afro-American Studies 200 Urban Studies 200 African Culture. Semester course; 3 lecture hours. 3 credits. An exploration of the unique and diverse cultural heritage shared by Africans. Particular attention will be given to life styles and work styles as these relate to knowledge, behavior, ideas, and objects.

201 The Evolution of Man and Culture. Semester course; 3 lecture hours. 3 credits. The application of evolutionary theory to the physical and cultural development of Homo sapiens.

252 The Archaeology of Richmond. Semester course; 3 lecture hours. 3 credits. The application of archaeological methods to Richmond's prehistoric, historic, and modern material culture. The city and surrounding counties are treated as an archaeological site and region. The artifacts left

by past and present inhabitants provide a foundation for analyzing ways of life in the area.

304/Sociology 304 The Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. The family in its social and cultural context. Analysis of child rearing, marriage, kinship, family crises, and family change in various societies around the world.

305 Comparative Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: a previous or concurrent course in social science. An introduction to social anthropology. The study of how social institutions such as marriage, family, law, economics, and government are organized and operate in different kinds of societies.

311/History 311 History of Human Settlement. Semester course; 3 lecture hours. 3-3 credits. A cultural geography of man's diffusion over the earth, agricultural and urban systems, exploration, migration, and colonization, and changing attitudes toward the environment. First semester: before 1750. Second semester: during and since the Industrial Revolution.

350/International Studies 350 Peoples and Cultures of the World. Semester course; 3 lecture hours. 3 credits. Prerequisite: ANT 103. May be taken for a maximum of six credits in two different world areas. A survey of the culture and traditions within a specific geographic area such as Latin America, Oceania, or Southeast Asia. See Schedule of Classes for areas being offered in a particular semester.

375 Field Archaeology. Semester course; 3 lecture, 8 field, and laboratory hours. 6 credits. Introduction to archaeological field and basic laboratory techniques. Archaeological data collection (excavation or survey) forms the core of the course.

380/Sociology 380 Drugs, Society, and Culture. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. An examination of the anthropological and sociological significance of drugs and drug use from prehistoric cultures through modern societies.

386/English 386 Introduction to Folklore. Semester course; 3 lecture hours. 3 credits. A survey of the basic forms of folklore including proverbs, riddles, ballads, folktales, legends, myths, and games. The survey will also include approaches to collecting material and examining its literary, social, and historical significance.

391 Topics in Anthropology. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester; maximum total of 18 credits in departmental topics courses which may be applied to the major. Prerequisite: permission of instructor. Seminar on current specialized areas of anthropological interest. See Schedule of Classes for specific topic to be offered each semester.

425 Religion, Magic, and Witchcraft. Semester course; 3 lecture hours. 3 credits. A survey of the nature and variety of beliefs outside of the major streams of religious thought. Among topics considered are myth, totemism, taboo, and sorcery. Emphasis on understanding supernatural beliefs and practices in relation to culture and society.

492 Independent Study. Semester course; variable credit, maximum six credits per semester; maximum total for all independent study courses 12 credits. Open generally only to students of junior or senior standing who have acquired at

least 12 credits in the departmental discipline. Determination of the amount of credit and permission of the instructor and department chairman must be procured prior to registration for the course. Cannot be used in place of existing courses.

COURSES IN BIOLOGY (BIO)

NOTE: The following courses do not apply toward the major in biology: BIO 205, 206, 209, 210, 211, 216, 217, 315, 332, 465.

101–102 General Biology. Continuous course; 3 lecture hours. 3–3 credits. First semester: fundamental properties of living systems. Second semester: organismal biology and ecology.

L101 General Biology Laboratory I. Semester course; 2 hours. 1 credit. Laboratory demonstrations correlated with BIO 101. Can be taken only concurrently with or subsequent to BIO 101.

L102 General Biology Laboratory II. Semester course; 2 hours. 1 credit. Laboratory demonstrations correlated with BIO 102. Can be taken only concurrently with or subsequent to BIO 102.

L111 Honors General Biology Laboratory. Semester course, 3 laboratory hours. 1.5 cr. Pre- or corequisite — BIO 101. An indepth, participatory laboratory correlating with BIO 101. Credit will not be given for both BIO L101 and BIO L111.

L112 Honors General Biology Laboratory. Semester course. 3 laboratory hours. 1.5 cr. Pre- or corequisite — BIO 102. An indepth, participatory laboratory correlating with BIO 102. Credit will not be given for both BIO L102 and L111.

200 Biological Terminology. Semester course; 1 lecture hour. 1 credit. Prerequisite: a course in biology. The study of Greek and Latin word roots, prefixes, and suffixes in the vocabulary of biology through readings and drills with the aid of a dictionary.

205 Basic Human Anatomy. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisites: BIO 101 and L101. Human body structure with emphasis on the skeletal-muscular aspects, utilizing the cat for dissection and human specimens and models as demonstrations. (Not applicable to the biology major.)

206 Human Physiology. Semester course; 3 lecture and 2 laboratory hours. 4 credits. Prerequisites: BIO 101 and L101. Functioning of the human body with emphasis on experimental procedures. (Not applicable to the biology major.)

209 Medical Microbiology. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisites: BIO 101 and L101. General principles and techniques of microbiology and the relations of microorganisms to disease. (Not applicable to the biology major.)

210 Elementary Human Genetics. Semester course; 3 lecture hours. 3 credits. Prerequisite: eight credits in biology. A study of the fundamental laws of genetic disorder and diseases of man. Does not fulfill the major requirements in biology. Not open to students who have completed BIO 310.

211 Plants and People. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 102 and L102 or introductory

botany. A study of plants and their impact on people. Foods, beverages, drugs, clothing, and art are among the topics considered. (Not applicable to the biology major.)

216 Genetic Technology and Society. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 101 and 102. The scientific, philosophical, and historical development of current thought concerning the implications of genetic technology, ethical aspects, and impacts on society. Topics such as eugenics, Lysenkoism, intelligence factors, sociobiology, genetic counseling, amniocentesis and genetic screening, cloning, in-vitro fertilization, and recombinant-DNA technology will be discussed. (Not applicable to the biology major.)

217 Principles of Nutrition. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 101. An introduction to basic principles of nutrition and their application in promoting growth and maintaining health throughout the life cycle. (Not applicable to the biology major.)

218 Cell Biology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 101, L101, 102, and L102 and eight credits in chemistry. An introductory examination of fundamental cellular process including structure-function relationships, enzymology, metabolism, genetic function, and cellular reproduction.

291 Topics in Biology. Semester course; 1, 2, or 3 credits, maximum 3 credits per semester; maximum total credit for all topics courses 6 credits (BIO 291 and/or 491). A study of a selected topic in biology. See the Schedule of Classes for specific topic(s) and prerequisites.

292 Independent Study. Semester course; variable credit, maximum 2 credits per semester; maximum total credit for all independent study courses (BIO 292 and/or 492) six credits. Prerequisite: eight credits in biology and an overall GPA of 3.0. Determination of the amount of credit and permission of the instructor and department chairman must be obtained prior to registration for the course. Designed to allow students to accomplish independent readings of biological literature under the supervision of a staff member.

300 Basic Biological Microtechniques. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisites: BIO 101, L101, 102, and L102. Principles of microscopy; photomicrography; processing, staining, and mounting plant and animal tissue; vital staining; isolation of cells and organelles.

301 Comparative Vertebrate Anatomy. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: BIO 101, L101, 102, and L102. The evolution of vertebrate forms as demonstrated by anatomical studies of selected vertebrate types.

302 Animal Embryology. Semester course; 2 lecture, 1 recitation, and 4 laboratory hours. 4 credits. Prerequisite: BIO 218. Basic reproductive and developmental processes during animal embryonic development. Includes programming/packaging in the egg, cell-cell interactions, basic organogenesis, causes of abnormal development. Cellular mechanism and the role of differential gene activity in developmental processes will be emphasized. Laboratory includes observation of developmental processes and experimental work using living invertebrate and vertebrate embryos.

303 Bacteriology. Semester course; 2 lecture, 1 recitation, and 4 laboratory hours. 4 credits. Prerequisites: BIO 218 and eight credits in chemistry. The morphology and physiology of bacteria as applied to their cultivation, identification, and significance to other organisms.

307 Aquatic Ecology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 317, CHE 102, and L102. The physical, chemical, and especially the biological aspects of freshwater ecosystems.

308 Vertebrate Histology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 101, L101, 102, and L102. The microscopic structure of vertebrate tissues and organs for the techniques used in the preparation of materials for histological study.

309 Entomology. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: BIO 101, L101, 102, and L102. Field and laboratory work emphasized to illustrate insect diversification, diagnostic features, habitats, and development patterns. A project is required and some independent work will be necessary.

310 Genetics. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 218. The basic principles of molecular and applied genetics of plants, animals, and microorganisms.

L310 Laboratory in Genetics. Semester course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: BIO 310. Exercises and experiments designed to demonstrate the laws of heredity using a variety of eukaryotic organisms such as corn, onions, fruit flies, mice, and humans.

311 General Physiology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 218. Physiological principles of cells, tissues, organs, and organisms from the viewpoint of chemical and physical phenomena.

312 Invertebrate Zoology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 101, L101, 102, and L102. A survey of the invertebrate animals with emphasis on environmental interactions. A weekend trip to a marine environment is required.

313 Vertebrate Natural History. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 101, L101, 102, and L102. The natural history of vertebrates with emphasis on the species native to Virginia.

315 Man and Environment. 3 lecture hours. 3 credits. A comparative study of the ecology and natural history of human populations, including the environments as determining factors in the evolution of human institutions and technology, resources management, and population crises; cultural traditions as mechanisms of population control, basic theory of population biology. Not applicable to the biology major.

317 Ecology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 101, L101, 102 and L102. The interaction of the organism and the biology and physical environments.

L317 Ecology Laboratory. Semester course; 4 laboratory hours. 2 credits. Prerequisite: BIO 317 or concurrent registration in BIO 317.

319 Survey of the Plant Kingdom. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO

101, L101, 102 and L102. A study of representative plants and their life cycles.

320 Biology of the Seed Plant. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 101, L101, 102 and L102. The physiology, structure, and adaptation of seed plants.

321 Plant Development. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 218. A survey of the developmental changes that take place during the life cycle of lower and higher plants. Emphasis is placed on the control factors which are involved in regulating the ordered changes which take place during development.

327 Plant Pathology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 320. A study of the induction, development, and control of diseases of vascular plants.

332 Environmental Pollution. Semester course; 3 lecture hours. 3 credits. Prerequisite: eight credits in biology. The pollution in the environment with emphasis on the procedures for detection and abatement. (Not applicable to the biology major.)

401 Applied and Environmental Microbiology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 303 or equivalent. The biology and chemical activities of microorganisms (bacteria, algae, virus, and fungi) of industrial, pharmaceutical, and agricultural importance.

403 Ichthyology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317 or equivalent. Evolution, taxonomy, structure, behavior, and ecology of fishes. Laboratory work will include special field trips for the collection of specimens.

405 Bacterial Physiology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 303 or permission of instructor. The physiology of bacterial metabolism and growth.

406 Mycology. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisites: 16 credits of biology including either BIO 303 or a plant biology course. The fungi — their structure, physiology, cytology, genetics, evolution, and systematics and their application to plant pathology, medical mycology, and biotechnology. The laboratory culture, identification, and maintenance of fungi.

409 Plant Anatomy. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 320. Preparation and study of cells, tissues, and organs of seed plants.

410 Plant Taxonomy. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisites: BIO 101, L101, 102, and L102 or permission of instructor. Systematic survey of the vascular plant families with emphasis on relationships. Some field trips for observing local flora.

411 Summer Flora. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisites: BIO 101, L101, 102, and L102 or permission of instructor. Field course in taxonomy of local summer flora.

413 Parasitology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: 14 credits in biology or permission of instructor. A survey of the life cycles, classification, host-parasite relationships and general biology of animal parasites.

415 Aquatic Macrophytes. Semester course; 1 lecture and 5 laboratory hours. 3 credits. Prerequisite: BIO 410 or 411. Field and laboratory study of vascular plants or aquatic habitats; including collection and identification, and consideration of the ecology, morphology, and economic value of aquatic macrophytes.

416 Ornithology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: eight credits of biology or permission of instructor. Basic biology of birds, with emphasis on their role in the environment.

417 Mammalogy. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: 12 credits of biology and permission of instructor. Study of the characteristics, adaptive radiation, and distribution of mammals, with emphasis on North American forms.

420 Plant Physiology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 218 and either BIO 319, 320, or 321. Topics: photosynthesis, mineral nutrition, transport, phytohormones, development, tissue culture, and environmental stress. The laboratory will stress student-oriented research projects.

429 Neuroanatomy. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: BIO 465 or permission of instructor. A study of the morphology and functional aspects of the central and peripheral nervous system of the human body.

430 Human Genetics. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 310 and CHE 301, L301, 302, and L302. A broad approach, at an advanced level, to human genetics. Topics include cytogenetics, pedigree analysis, genetic mapping, aneuploid syndromes, immunogenetics, inborn errors of metabolism, cancer, genetic engineering, behavior and intelligence, amniocentesis, and genetic counseling.

431 Introduction to Marine Biology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 317 and CHE 102, L102. An introduction to physical, chemical, and geological oceanography and a more detailed treatment of the organisms and ecological processes involved in the pelagic and benthic environments of the world's oceans and estuaries.

432 Biology of Polluted Waters. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 317 and CHE 102, L102. Survey of the effects of water quality on the biota of freshwater and marine ecosystems with industrial and domestic water usage considerations.

435 Herpetology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 301 or permission of instructor. The phylogeny, natural history, and adaptation of the amphibians and reptiles.

L436 Laboratory in Herpetology. Semester course; 2 laboratory hours. 1 credit. Prerequisite: BIO 301 or equivalent and permission of instructor. Exercises on the anatomy, classification, and behavior of amphibians and reptiles. Two weekend field trips required.

445 Animal Behavior. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317 or equivalent. The study of animal behavior stressing ecological, evolutionary, and physiological approaches.

455 Immunology and Serology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: 16 credits in

biology including BIO 218 and eight credits in chemistry. Basic aspects of the immune response in higher animals. Study of the serological techniques used in biological research.

465 Functional Human Anatomy. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisites: BIO 205 or equivalent and permission of instructor. A study of the anatomy and kinesiology of the human body using prosected specimens and the dissected cadaver. Particular emphasis is placed upon the study of the extremities. Not applicable to the major in biology—intended primarily for students in the Department of Occupational Therapy.

491 Topics in Biology. Semester course; 1, 2, 3, or 4 credits, maximum 4 credits per semester; maximum total credit for all topics courses six credits (BIO 291 and/or 491). An in-depth study of a selected topic in biology. See Schedule of Classes for specific topic(s) and prerequisites.

492 Independent Study. Semester course; variable credit, maximum 4 credits per semester; maximum total credit for all independent study courses (BIO 292 and/or 492) six credits. Open to juniors and seniors who have completed at least 12 credits in biology and have an overall GPA of 3.0. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. Activities include laboratory or field research under the direct supervision of a staff member. A minimum of 3 hours of supervised activity per week per credit hour is required.

Courses at the 500 level listed in this bulletin are open to qualified seniors and graduate students only.

501 Advanced Ecology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 317 or equivalent. Advanced studies of population ecology, including competition, predation, reproductive and disease, and in-depth analyses of community and ecosystem structure.

504 Comparative Animal Physiology. Semester course; 3 lecture and 4 laboratory hours. 4 credits. Prerequisites: BIO 218 and CHE 301, L301, 302, and L302. Comparative physiology of animals with an emphasis at the molecular level.

507 Aquatic Microbiology. Semester course; 2 lecture and 4 laboratory hours. 4 credits. Prerequisite: BIO 303 and 307 or equivalents. This course will involve a practical approach to the methods used to culture, identify, and enumerate specific microorganisms which affect the cycling of elements in aquatic systems and those which affect or indicate water quality.

512 Radiation Biology. Semester course; 3 lecture hours. 3 credits. Prerequisite: 16 credits in science, including eight credits in biology and/or permission of instructor. Lectures and demonstrations of the fundamentals of radioactivity, including the properties of radiation and the application of radioisotopes and tracer methodology to the biological sciences and nuclear medicine. Included are the biological effects of ionizing radiation on living systems and the theoretical and practical aspects of radiation protection.

L512 Radiation Biology Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: BIO 512. Laboratory experiences applying the practical aspects of radiometric determinations to the various areas of biology, including physiology.

514 Advanced Freshwater Ecology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 307 or equivalent. An advanced study of freshwater ecosystems, stressing the ecology of streams and rivers. Laboratory emphasis is on the structure and functioning of aquatic communities in mountain to coastal plain streams.

518 Plant Ecology. Semester course; 3 lecture and 2 laboratory hours. One three-day field trip is required. 4 credits. Prerequisite: BIO 317 or permission of instructor. A lecture, field, and laboratory course concerned with the development, succession, and dynamics of plant communities and their interrelations with climate, soil, biotic, and historic factors.

519 Marine Ecology. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: BIO 317 or equivalent. A lecture, field, and laboratory course concerned with the organizing principles of marine ecosystems. A study of selected marine faunal and floral communities and their interactions, including trophic relationships and utilization by man.

522 Evolution and Speciation. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 310 or equivalent. Study of evolutionary principles, with emphasis on genetic and environmental factors leading to changes in large and small populations of plants and animals, and the mechanisms responsible for speciation.

524 Endocrinology. Semester course; 3 lecture hours. 3 credits. Prerequisites: BIO 218 and CHE 301, L301, 302, and L302 or equivalent. Study of hormonal control system at the organ, tissue, and cellular level; although the major emphasis will be on vertebrate endocrine systems, some discussion of invertebrate and plant control systems will be covered.

539 Advanced Human Physiology. Semester course; 4 lecture and 2 laboratory hours. 5 credits. Prerequisites: BIO 206, or equivalent, and permission of the instructor. Intended primarily for graduate students in the School of Nursing; may be taken by others with permission. Physiology from a feedback control-systems point of view as a common theme for the various organ systems; it will then examine various pathophysiological situations as logical cause-and-effect relationships resulting from perturbations in the normal physiological homeostatic mechanisms. The weekly laboratory/demonstration periods will employ both "hands on" and demonstration types of exercises in order to reiterate and to strengthen points made in the lecture portion of the course.

550 Developmental Biology. Semester course; 2 lecture, 1 recitation, and 4 laboratory hours. 4 credits. Prerequisites: BIO 302 and 321. Cellular/molecular mechanisms of differentiation during embryonic and post-embryonic development in animals and plants. Genetic control at various levels leading to cell differentiation will be investigated in a number of developing systems, animal and plant embryos, seed germination, fern gametophyte, insect and amphibian metamorphosis, and animal regeneration. Laboratory work includes observation of developmental processes and experimental work using living material.

585 Virology. Semester course; 3 lecture hours. 3 credits. Prerequisites: 16 credits in biology including BIO 218 or equivalent, and 8 credits in chemistry. A comprehensive introduction to virology encompassing viruses of ver-

tebrates, invertebrates, plants, and bacteria. Topics include physical and chemical characterization, classification, detection, replication, genetics, diseases, immunology, epidemiology, and interactions of viruses.

COURSES IN CHEMISTRY (CHE)

NOTE: In chemistry laboratories each student is charged for breakage incurred. Regular safety glasses are required. Failure to check out of laboratory, upon withdrawal or for other reasons, will incur a charge of \$10, billed from the Office of Student Accounting.

100 Introductory Chemistry. Semester course; 2 lecture and one two-hour problem session. 3 credits. (These credits may not be used to satisfy any chemistry course requirements in the College of Humanities and Sciences.) A course in the elementary principles of chemistry; required of all students without a high school chemistry background but who need to take CHE 101-102. (This course is also recommended for students who have a poor high school background in the sciences but who need to take CHE 101-102.)

101-102 General Chemistry. Continuous course; 3 lecture and 1 recitation hour. 4-4 credits. Prerequisite: CHE 100 or a satisfactory score on the Chemistry Placement Test. Prerequisite or co-requisite: MAT 101. Fundamental principles and theories of chemistry, including qualitative analysis.

L101 General Chemistry Laboratory I. Continuous course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: CHE 101. Experimental work correlated with CHE 101.

L102 General Chemistry Laboratory II. Continuous course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: CHE 102. Prerequisite: CHE L101. Experimental work includes qualitative analysis.

103-104 Introduction to Modern Chemistry. Continuous course; 3 lecture hours. 3-3 credits. Introduces fundamental principles of modern inorganic, organic, and biochemistry and relates these to the chemistry encountered in everyday life, medicine, and the environment. (For non-chemistry majors; may not be used as a prerequisite for advanced chemistry courses.)

L103 Introduction to Modern Chemistry Laboratory I. Continuous course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: CHE 103. Experimental work correlated with CHE 103.

L104 Introduction to Modern Chemistry Laboratory II. Continuous course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: CHE 104. Prerequisite: CHE L103. Experimental work correlated with CHE 104.

NOTE: CHE 101, 102, L101 and L102 are prerequisites to all of the following chemistry courses.

301-302 Organic Chemistry. Continuous course; 3 lecture hours. 3-3 credits. A comprehensive survey of aliphatic and aromatic compounds with emphasis on their structure, properties, reactions, reaction mechanisms, and stereochemistry.

L301 Organic Chemistry Laboratory I. Continuous course; 4 laboratory hours. 2 credits. Prerequisite or co-requisite: CHE 301. Experimental work correlated with CHE 301.

L302 Organic Chemistry Laboratory II. Continuous course; 4 laboratory hours. 2 credits. Prerequisite: CHE L301. Prerequisite or co-requisite: CHE 302. Experimental work correlated with CHE 302.

303 Physical Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 201–202 or 207, 208 and MAT 200–201. Ideal and non-ideal gases, thermodynamics, free energy, and chemical equilibrium.

304 Physical Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 303 or 305 with permission of instructor. Kinetics, solution thermodynamics, heterogeneous equilibria, electrochemistry, and introductory biophysical chemistry.

L304 Physical Chemistry Laboratory. Semester course; 6 laboratory hours. 2 credits. Prerequisites: CHE 305 or 309. Co-requisite: CHE 304.

305 Introduction to Physical Chemistry. Semester course; 3 lecture and 3 laboratory hours. 4 credits. Prerequisite: MAT 200. Co-requisite: PHY 201 or 207. Concepts and principles of physical chemistry as related to the fields of biology, medicine, and veterinary science. (Not for chemistry majors.)

309 Quantitative Analysis. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisite: MAT 101 or equivalent. Theory and practice of gravimetric, volumetric, and instrumental analysis techniques, treatment of multiple equilibria in aqueous solutions.

403 Qualitative Organic Chemistry. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: CHE 301–302 and L301–302. Theory, problems, and laboratory practice of systematic qualitative analysis for organic compounds with emphasis on modern spectrometric and chromatographic methods.

406 Inorganic Chemistry. Semester course; 3 lecture hours. 3 credits. Prerequisite: CHE 303 and 304. Advanced treatment of atomic structure, chemical bonding, properties of the elements, metal complexes, acid-base theory, and related subjects.

L406 Inorganic Chemistry Laboratory. Semester course; 1 lecture and 3 laboratory hours. 2 credits. Prerequisite or co-requisite: CHE 406. Examination of inorganic non-metal, transition metal, and organometallic compounds using modern inorganic methods of synthesis and characterization.

409 Instrumental Analysis. Semester course; 2 lecture and 6 laboratory hours. 4 credits. Prerequisites: CHE 303, 304, and 309. Theory and practice of modern spectrophotometric, electroanalytical, and chromatographic techniques. Atomic absorption, selective ion electrodes, and uses of operational amplifiers.

492 Independent Study. Semester course; variable credit, maximum of four credits per semester; maximum total for all independent study courses eight credits. Open generally to students of junior or senior standing who have completed CHE 302, CHE L302, and CHE 309 and have a minimum GPA of 2.5 in chemistry courses. A determination of the amount of credit and the written permission of both the instructor and the department chairman must be procured prior to registration for the course. Investigation of chemical problems through literature search and laboratory experimentation.

493 Chemistry Internship. Semester course; variable credit, maximum of three credits. One credit will be given for each 150 hours (approximately one month) of part-time or full-time chemical work experience. Prerequisite: open to students who have completed 24 credits in chemistry. Permission of advisor and department chairman must be obtained prior to registration for the course. Acquisition of chemistry laboratory experience through involvement in a professional chemistry setting.

510 Atomic and Molecular Structure. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and PHY 208. Survey of the pertinent aspects of quantum mechanics. Line spectra, atomic structure and molecular bonding.

COURSES IN CHINESE (CHI)

101–102 Elementary Chinese. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drill.

201–202 Intermediate Chinese. Continuous course; 3 lecture hours. 3–3 credits. Rapid review of the essentials of grammar, conversation, and readings from Chinese literature.

COURSES IN THE COLLEGE OF HUMANITIES AND SCIENCES (CHS)

CHS 190 College Seminar. 1 lecture hour. 1 credit. A seminar designed for first-year programs coordinated through the Office of the Dean of the College of Humanities and Sciences. Designed to help students integrate general education courses. Open only to students who participate in these programs. May be repeated once for credit.

CHS 491 College Topics. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for maximum of six credits. A discussion of complex issues that are of enduring value or of critical interest to society. The goals of the course are to (1) bring general principles from disciplinary or a variety of disciplinary contexts to bear on specific problems; (2) exercise critical thinking; (3) understand and integrate diverse perspectives; and (4) explore models of decision-making, underlying assumptions, and implications. Open primarily to seniors; others with permission of instructor. See Schedule of Classes for specific issues to be offered each semester.

COURSES IN COMPARATIVE LITERATURE (CML)

301 Introduction to Comparative Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in foreign or English literature. An introduction to the history, theory, and practice of comparative literature, with emphasis on practical exercises in the application of comparative methods.

391/Foreign Literature in English Translation 391 Topics in Comparative Literature. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of 6 credits in all topics courses at the upper-division level. An in-depth study of selected topics in comparative literature. See Schedule of Classes for specific topics to be offered each semester.

485 Seminar in Comparative Literature. Semester course; 3 lecture hours. 3 credits. Prerequisites: ENG 201–202 or

equivalent, ENG 350, and 12 additional upper-division credits in English, foreign literature ARH, CML, FLT, or THE courses. Students will prepare individual papers or projects in comparative literature. The course will begin with some attention to comparative methods and procedures of independent work. Designed for comparative literature majors.

492 Independent Study. Semester course; variable credit maximum three credits per semester; maximum total for all independent study courses in CML is six credits. Open generally only to students of junior or senior standing who have completed 12 upper-division credits in English, foreign literature, ARH, CML, FLT, or THE courses. Determination of course content and permission of the instructor must be obtained prior to registration for the course. The course is designed to give students an opportunity to become involved in independent study in a specific area of comparative literature in which they have an interest.

COURSES IN COMPUTER SCIENCE

(CSC) Computer Science is one of the mathematical sciences. See mathematical sciences for course descriptions.

COURSES IN EARTH SCIENCE (EAS)

401 Meteorology and Climatology. Semester course; 3 lecture hours. 3 credits. Prerequisite: GEO 203 or a physical science sequence or permission of instructor. A basic, semi-quantitative course in the elements of weather and climate, their driving forces, and their spatial and temporal distribution and variability. Atmospheric motions and circulation, weather forecasting, human impact on weather, and climate.

L401 Meteorology and Climatology Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: EAS 401. A series of laboratory and field experiments designed to quantify the elements of weather and climate and to interpret their local temporal and spatial variations.

411 Oceanography. Semester course; 3 lecture hours. 3 credits. Prerequisite: GEO 203 or 204 or PHY 101 or a natural science sequence or permission of instructor. A basic course in the physical, chemical, and geological properties of oceans and ocean basins. Origin and character of ocean basins, properties of oceanic waters, oceanic circulation, land-sea interactions, marine environments, and ecology. Designed for earth science teachers.

COURSES IN ECONOMICS (ECO)

See the School of Business section of this bulletin for course descriptions.

COURSES IN ENGLISH (ENG)

001 Fundamentals of English Composition. Semester course; 3 lecture hours. 0 credits. A course designed to prepare students for ENG 101 Composition and Rhetoric by teaching them to write clear sentences and well-developed, well-organized paragraphs. (This course is recommended for students who have not previously studied grammar and composition extensively and will be required for those stu-

dents whose English placement scores indicate inadequate preparation in grammar and composition.)

002 English as a Second Language. Semester course; 2 laboratory and 2 lecture hours. 0 credits. Instruction in English pronunciation, grammar, vocabulary, and writing for students whose native language is not English. Primarily for students whose English as a second language skills are at the intermediate level.

101–102 Composition and Rhetoric. Continuous course; 3 lecture hours. 3–3 credits. First semester: fundamentals of effective writing and critical analysis. Second semester: more complex writing and analysis—principles of sound critical thinking, the uses of research, and responsible use of evidence. Credit for 101 may be granted through achievement of an appropriate score on the English Placement Test. In unusual cases and with permission from the director of composition and rhetoric, students may be allowed to substitute an appropriate course for one semester of composition and rhetoric. Students wishing to take advantage of this provision must pass an appropriate placement test.

114 English Grammar and Usage. Semester course; 3 lecture hours. 2 credits. Prerequisite: ENG 101 or permission of the director of composition and rhetoric. An intensive study of the fundamentals of English grammar, usage, punctuation, mechanics, and spelling through drills and written exercises. This course is not equivalent to English 101 or 102, and these credits may not be used to satisfy the College of Humanities and Sciences degree requirement in composition and rhetoric.

NOTE: ENG 101–102 is prerequisite to all the following English courses.

201, 202 Western World Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general study of Western world literature, including English and American literature. First semester: Homer to Shakespeare. Second semester: Milton to Faulkner.

203, 204 English Literature. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the literature of England with collateral readings, discussions, and reports. First semester: *Beowulf* to Johnson. Second semester: Wordsworth to Auden.

205, 206 American Literature. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the literature of the United States. First semester: before 1855. Second semester: since 1855.

209, 210/Art History 209, 210 American Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of American art and literature with special emphasis on the relationships between visual and literary works. First semester: before 1865. Second semester: since 1865.

211, 212/Art History 211, 212 Western World Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of Western world art and literature with special emphasis on the relationships between visual and literary works. First semester: ancient Greece through the sixteenth century. Second semester: seventeenth century to the present.

215 Introduction to Literary Genres. Semester course; 3 lecture hours. 3 credits. A study of the major literary genres

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(e.g., poetry, fiction, drama), designed to develop an understanding and appreciation of literature.

216 Stories. Semester course; 3 lecture hours. 3 credits. A study of what makes good or satisfying storytelling through discussion of such narrative forms as jokes, folktales, radio scripts, children's tales, short stories, and novels.

226 Current Literature. Semester course; 3 lecture hours. 3 credits. Introduction to critical reading through the study of new works of fiction, drama, or poetry by writers of established reputation. Selections will vary with each instructor, and works covered will have been published within the past ten years.

231 Fantastic Visions. Semester course; 3 lecture hours. 3 credits. Introduction to the literature of alternative reality—social and psychological—as presented in science fiction, prophecy, and fantasy.

233 Literature and Science. Semester course; 3 lecture hours. 3 credits. An introduction to literary analysis and genres which focuses on literature related to modern science, including essays which compare literary and scientific perspectives.

236 Women in Literature. Semester course; 3 lecture hours. 3 credits. A study of literature by and about women with the intent of exploring images of women as reflected in fiction, poetry, and drama.

241 Introduction to Shakespeare. Semester course; 3 lecture hours. 3 credits. A close reading of a limited number of plays with careful attention to Shakespeare's art and dramatic conventions.

291 Topics in Language or Literature. Semester course; 3 lecture hours. 3 credits. Maximum six credits in all topics courses at the 200 level. An in-depth study of a selected topic or genre in language or literature, or study of any non-western literatures. See Schedule of Classes for specific topic to be offered each semester.

300 Practical Writing Workshop. Semester course; 3 workshop hours. 1–3 credits; 5, 10, or 15 weeks. Prerequisite: ENG 101–102. Practical Writing Workshop is a variable credit course covering organization, writing, and revision skills useful in upper-level university classes and on-the-job situations. Classes will be conducted as workshops, discussions, and lectures. Assignments may consist of paragraphs, revision exercises, research reports, summaries, critical reviews, letters, and resumes. Does not satisfy the Humanities and Sciences minimum competency writing requirements or count toward requirements for the English major or minor.

302 Legal Writing. Semester course; 3 lecture hours. 3 credits. Intensive practice in writing on subjects related to law or legal problems. Emphasis on organization, development, logical flow, and clarity of style. May not be used to satisfy the literature requirement of the College of Humanities and Sciences requirement in literature.

304 Advanced Composition. Semester course; 3 lecture hours. 3 credits. An advanced study of the writing of non-fiction prose, such as interviews, reviews and criticism, satire and humor, scientific and analytic writing. Techniques of rewriting and publishing will also be considered. May not be used to satisfy the literature requirement of the College of Humanities and Sciences.

305 Creative Writing: Genres. Semester course; 3 workshop hours. 3 credits. May be repeated once for credit. Sections: poetry, fiction, drama, or multigenre. A workshop primarily for students who have not produced a portfolio of finished creative work. Students will present a collection of their work at the end of each course. See Schedule of Classes for specific genres to be offered each semester. May not be used to satisfy the literature requirement of the College of Humanities and Sciences requirements in literature.

307/Education 307 Teaching Writing Skills. Semester course; 3 lecture hours. 3 credits. A study of the methods for teaching writing to students in middle and secondary schools. Students will learn to teach the basic skills of grammar and mechanics as well as the more advanced skills of planning, writing, and revising papers. They will also practice these skills in their own writing. May not be used to satisfy the literature requirement of the College of Humanities and Sciences.

313 Southern Literature. Semester courses; 3 lecture hours. 3 credits. An intensive survey of the literature of the South with special attention to the works of Poe, Kennedy, Page, Cabell, Glasgow, Caldwell, Welty, McCullers, and Faulkner.

314/Afro-American Studies 314 Black American Writers. Semester course; 3 lecture hours. 3 credits. An examination of the contribution of black writers in America from colonial times to the present.

315 The Modern Novel. Semester course; 3 lecture hours. 3 credits. An examination of the novel, chiefly British and European, in the twentieth century.

316 Modern Poetry. Semester course; 3 lecture hours. 3 credits. A study of British and American poetry in the first half of the twentieth century.

317 Modern Drama. Semester course; 3 lecture hours. 3 credits. A study of the development of the drama since Ibsen, particularly in England and America.

318 Contemporary Poetry. Semester course; 3 lecture hours. 3 credits. A study of British and American poetry from approximately 1950 to the present for the purpose of determining the aesthetic and thematic concerns of contemporary poets.

319 Age of Dryden and Pope. Semester course; 3 lecture hours. 3 credits. English literature of the Restoration and early eighteenth century with special attention to Dryden, Defoe, Addison, Steele, Swift, Pope, and Gay.

320 Age of Johnson. Semester course; 3 lecture hours. 3 credits. English literature of the later eighteenth century with emphasis on the Johnson-Boswell circle.

321 Romantic Literature. Semester course; 3 lecture hours. 3 credits. A survey of the poetry and prose of Romanticism in England, usually including Blake, Wordsworth, Coleridge, Byron, Shelley, Keats, and the Brontës.

322 Victorian Poetry. Semester course; 3 lecture hours. 3 credits. A survey of the poetry of Victorian England, usually including Tennyson, Browning, Arnold, Rossetti, Hopkins, and Yeats.

323 Twentieth Century British Literature. Semester course; 3 lecture hours. 3 credits. Representative British poetry, fiction, and drama of the twentieth century, usually

including Yeats, Joyce, Shaw, Lawrence, Conrad, Auden, Forster, Woolf, Thomas, and Orwell.

327/Business 327 Business and Technical Report Writing. Semester course; 3 lecture hours. 3 credits. Development of critical writing skills used in business, science, technology, and government, including instructions, descriptions, process explanations, reports, manuals, and proposals. The course will include such topics as communication theory, technical style, illustrations, formats for proposals, reports, and manuals. May not be used to satisfy the literature requirement of the College of Humanities and Sciences.

335 The Glories of the English Renaissance. Semester course; 3 lecture hours. 3 credits. An introduction to some of the most exciting works of a dynamic age, providing an understanding not only of the achievements of Shakespeare, Spenser, and Milton, but also of the literary period from which they emerged.

350 Approaches to Literature. Semester course; 3 lecture hours. 3 credits. The study and application of various critical approaches—historical, sociocultural, psychological, archetypal, and formalist—used in analyzing literary works.

361/Religious Studies 361 The Bible As Literature. Semester course; 3 lecture hours. 3 credits. Literary aspects of the Bible will be considered. Also attention will be given to the history of the English Bible.

363/Afro-American Studies 363 African Literature. Semester course; 3 lecture hours. 3 credits. The study of African oral performances and written literatures in English with emphasis on the literature of West and South Africa.

365/Afro-American Studies 365 Caribbean Literature. Semester course; 3 lecture hours. 3 credits. A survey of West Indian writings. Attention will be given to African, European, and Amerindian influences, as well as to the emergence of a West Indian literary tradition.

367 Eastern Thought in Western Literature. Semester course; 3 lecture hours. 3 credits. An exploration of the influence of Eastern thought on Western writers, with emphasis on the period from the nineteenth century to the present.

371 American Literature, Colonial and Federal. Semester course; 3 lecture hours. 3 credits. A study of the most important writings from the founding of the first colonies to the establishment of the federal government with some concentration on Taylor, Edwards, and Franklin.

372 American Literature, the American Renaissance. Semester course; 3 lecture hours. 3 credits. A study of the most important writings of the Romantics in the nineteenth century, with some concentration on Poe, Emerson, Thoreau, Hawthorne, Melville, and Whitman.

373 American Literature, Realism and Naturalism. Semester course; 3 lecture hours. 3 credits. A study of the most important writings from the end of the Civil War to the coming of World War I, with some concentration on Clemens, Howells, James, and Stephen Crane.

374 American Literature, Early Twentieth Century. Semester course; 3 lecture hours. 3 credits. A study of the most important writings between World War I and World War II, with some concentration on Frost, Eliot, Steinbeck, Hemingway, and Faulkner.

375 American Literature, Contemporary. Semester course; 3 lecture hours. 3 credits. A study of the most important writings since World War II, with some attention to such authors as Baldwin, Bellow, Ellison, Lowell, Mailer, Malamud, Updike, and Wilbur.

381 Fiction Into Film. Semester course; 2 lecture and 1 laboratory hour. 2 or 3 credits, 10 to 15 weeks, decided in advance. A study of the translation of literature into film. Topical approaches vary from semester to semester. Consideration is given to the literature in its original form and to the methods of translating it into film.

384 Women Writers. Semester course; 3 lecture hours. 3 credits. A study of selected literature written by women and about women writers with some attention to biography and literary characteristics and problems unique to women writers.

386/Anthropology 386 Introduction to Folklore. Semester course; 3 lecture hours. 3 credits. A survey of the basic forms of folklore including proverbs, riddles, ballads, folktales, legends, myths, and games. The survey will also include approaches to collecting material and examining its literary, social, and historical significance.

390 Studies in Satire. Semester course; 3 lecture hours. 3 credits. Studies in the satiric mode, with some attention to the definition and development of the mode.

391 Topics in Literature. Semester course; 3 lecture hours. 3 credits; maximum 12 credits in all topic courses at the upper-division level. Prerequisite: junior standing. An in-depth study of a literary genre, an aesthetic or cultural theme in literature, or of a major writer in English or American literature. See Schedule of Classes for specific topic to be offered each semester.

***401 Shakespeare.** Semester course; 3 lecture hours. 3 credits. A study of representative comedies, histories, and tragedies.

***402 Chaucer.** Semester course; 3 lecture hours. 3 credits. A study of *The Canterbury Tales* and *Troilus and Criseyde*, with some attention to the lesser works.

***403 Milton.** Semester course; 3 lecture hours. 3 credits. A study of *Paradise Lost*, *Paradise Regained*, and *Samson Agonistes*, with some attention to the minor poems and selected prose.

407 Medieval Epic and Romance. Semester course; 3 lecture hours. 3 credits. A study of the vernacular epic and the romance in England and on the continent prior to 1500.

409 Medieval Studies:—Semester course; 3 lecture hours. 3 credits. Studies in the English language and literature of the Middle Ages. May be repeated with different topics for a maximum of six credits.

414 The American Novel. Semester course; 3 lecture hours. 3 credits. A study of the American novel from 1789 to the present, with particular emphasis on Cooper, Hawthorne, Melville, Twain, Howells, James, Dreiser, Fitzgerald, Hemingway, and Faulkner.

415 English Novel, Eighteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the *English novel* from its beginning through Jane Austen, usually including Defoe, Richardson, Fielding, Smollett, and Sterne.

416 English Novel, Nineteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the English novel, usually including Dickens, Thackeray, the Brontës, Eliot, and Hardy.

418 Intellectual Controversies in Victorian Culture. Semester course; 3 lecture hours. 3 credits. A study of the nature of art, faith and doubt, political belief, the theory of progress, evolution, the image of women, and other controversial issues, first expressed in the prose of such figures as Arnold, Pater, Huxley, Carlyle, Darwin, and Ruskin.

421, 422 Comparative Literature. Semester courses; 3 lecture hours. 3,3 credits. A comparative study of the forms and contents of the literature of Western civilization in translation with some attention to the dominant influence on and interrelationships between English and continental literatures. First semester: ancient, medieval, and renaissance. Second semester: neoclassical, romantic, and modern.

423 English Drama, 900–1642. Semester course; 3 lecture hours. 3 credits. A study of the origin of the English drama and its development until the closing of the theaters in 1642, exclusive of Shakespeare.

424 Restoration and Eighteenth Century Drama. Semester course; 3 lecture hours. 3 credits. A study of English drama from Dryden to Goldsmith, usually including the comedy of wit, sentimental comedy, ballad opera, farce, and heroic and bourgeois tragedy.

426–427/Theatre 426–427 Playwriting. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: ENG 317 or permission of instructor. A practical introduction to the creation of original scripts for theatre, television, and/or motion pictures. Works may be selected for reading and performance. May not be used to satisfy the College of Humanities and Sciences requirements in literature.

429 Form and Theory of Poetry. Semester course; 3 lecture hours. 3 credits. A study of the poetic process with the aim of showing readers how poems are created and come to have meaning, and giving readers the language and methods of critical analysis and synthesis.

430 Form and Theory of Fiction. Semester course; 3 lecture hours. 3 credits. A study of the process of fiction writing with the aim of showing readers how novels and stories are created and come to have meaning, and giving readers the language and methods of critical analysis and synthesis.

433 Literature for Adolescents. See EDU 433.

435, 436 Creative Writing: Poetry. Semester courses; 3 workshop hours. 3, 3 credits. Prerequisite: permission of instructor. Study of the craft of writing, with instruction and guidance toward constructive self-criticism. Workshop members will be expected to produce a substantial volume of quality work and to become proficient in critical analysis in order to evaluate and articulate the strength of their own poetry. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

437, 438 Creative Writing: Fiction. Semester courses; 3 workshop hours. 3, 3 credits. Prerequisite: permission of instructor. Study of the craft of fiction writing, with instruction and guidance toward constructive self-criticism. Workshop members will be expected to produce a substantial volume of short stories or portion of a novel and to become

proficient in the critical analysis of fiction in order to evaluate and articulate the strength of their own work. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

441 Renaissance Literature. Semester course; 3 lecture hours. 3 credits. A survey of the nondramatic literature of the sixteenth century in England from Skelton to Spenser.

442 Seventeenth Century Literature. Semester course; 3 lecture hours. 3 credits. A study of nondramatic poetry and prose in England from 1600 to 1660.

***446/Linguistics 446 Nonstandard Urban Dialects.** Semester course; 3 lecture hours. 3 credits. An examination of the language of the inner city and the pedagogical problems involved in teaching Standard English. Covers such topics as the phonology, syntax, and rhetoric of inner city nonstandard dialects. Primarily for prospective teachers. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***449/Linguistic 449 Introduction to Linguistics.** Semester course; 3 lecture hours. 3 credits. An introduction to methods of language analysis, emphasizing the study of sounds and sound patterns, and units of meaning and their arrangements. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

450/Linguistics 450 Modern Grammar. Semester course; 3 lecture hours. 3 credits. Study of modern English grammar and usage with some attention to linguistic theory. Recommended for teachers at all levels. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***451/Linguistics 451 History of the English Language.** Semester course; 3 lecture hours. 3 credits. The historical development of the English language; etymology, morphology, orthography, and semantics. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

453/Linguistics 453 Introduction to Modern Rhetoric. Semester course; 3 lecture hours. 3 credits. An introduction to the broad range of modern rhetorical theories, emphasizing their relationships with linguistics, literary criticism, and the process of writing. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

491 Topics in Literature. Semester course; 3 lecture hours. 3 credits; maximum 12 credits in all topics courses at the upper-division level. An in-depth study of a selected literary topic or genre or of one or two major writings in English or American literature. See Schedule of Classes for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum three credits per semester; maximum total for all independent study courses nine credits. Open generally only to students of junior or senior standing who have acquired at least 12 hours of English (including freshman composition). Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in literary or linguistic area or subject in which they have an interest.

493 English Internship. Semester course; 1–3 credit hours per semester, maximum total of 6 credits. Open to students with demonstrable writing ability; completion of ENG 302, 304, or 327 is recommended. Students will apply research, writing, and/or editing skills in an approved job in areas such as business, government, law, or financial services. Permission and determination of credit must be established prior to registration.

498 English Honors Seminar. Semester course; 3 lecture hours. 3 credits. Prerequisite: admission to the Honors in English Program or permission of the English Honors Committee. University honors students will be admitted as space permits and only if they have successfully completed six hours in literature courses. Examination of selected topics in language and literature, with an emphasis on theories of literary study and writing skills. See Schedule of Classes or coordinator of the English Honors Program for specific topic to be studied each semester. May be repeated once for credit if space permits.

499 English Honors Thesis. Semester course; 3 credits. To be taken twice, in consecutive semesters. Prerequisite: Honors in English Program membership and senior standing. A study of topic or author under the supervision of the English Honors Committee and its appointed thesis advisor. The subject of the thesis, its scope and method, will be designed by the student in consultation with the advisor and approved by the English Honors Committee.

552/Education 552 Teaching English as a Second Language. Semester course; 3 lecture hours. 3 credits. Provides students who plan to teach English to people whose native language is not English with techniques used in teaching foreign languages. Contrastive analyses of morphology, phonology, and syntax are used to isolate areas of difficulty in learning English.

COURSES IN ENVIRONMENTAL STUDIES (ENS)

490 Research Seminar in Environmental Studies. Semester course; 3 lecture hours. 3 credits. Prerequisite: senior standing and at least 12 hours of approved environmental studies course work. An interdisciplinary examination of problems and issues central to environmental studies. Environmental research of VCU faculty will be reviewed, and selected local environmental problems will be studied. A research project focusing on a specific environmental question will be completed by each student.

491 Topics in Environmental Studies. Semester course; variable credit, 1–3 credits per semester; may be repeated with different topics for a maximum of six credits. Prerequisites vary by topic; see class schedule for specific prerequisites. An in-depth study of a selected environmental topic.

493 Environmental Studies Internship. Semester course; variable credit. 1–3 credits per semester; maximum total of six credits. Open generally to students of senior standing. Students receive credit for work on environmental projects with approved agencies. Participation requires the approval of both a faculty member and an agency.

COURSES IN EUROPEAN CULTURES (EUC)

305 Aspects of French Culture. Semester course; 3 lecture

hours. 3 credits. A broad interdisciplinary approach to an understanding of French culture, language, and literature. Lectures in English by guest speakers and/or use of films as required. (This course will not satisfy foreign language requirements. No knowledge of French is required. All work is done in English.)

307 Aspects of German Culture. Semester course; 3 lecture hours. 3 credits. A broad interdisciplinary approach to an understanding of German culture, language, and literature. Lectures in English by guest speakers and/or use of films as required. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

311 Classical Mythology. Semester course; 3 lecture hours. 3 credits. The basic myths of the Greek and Roman heritage. Their impact in culture then and now; from the origins of Greek myth to the superstitions of the late Roman and early Christian world.

340/Urban Studies 350 Culture and Urbanism in Great European Cities. Semester course; 3 lecture hours. 3 credits. Prerequisite: sophomore standing or permission of instructor. Course may be repeated under different topics for a total of six credits. An interdisciplinary course with a dual focus on the origin, expansion, and significance of an important European city and on reflections of urbanism in its culture. Particular emphasis will be placed on relating the physical, social and economic aspects of the city's growth and development to the cultural dimensions of urbanism, especially as the latter are manifested in major works of literature.

COURSES IN FOREIGN LITERATURE IN ENGLISH TRANSLATION (FLT)

301 Early Chinese Literature. Semester course; 3 lecture hours. 3 credits. *The Book of Songs*; the selected teaching of Confucius; the Taoist tales; the poetry of the Tang and Sung Dynasties; the Chinese philosophical mind. (This course will not satisfy foreign language requirements. No knowledge of Chinese is required. All work is done in English.)

302 Revolution and Erotic Life in Chinese Literature. Semester course; 3 lecture hours. 3 credits. The problems of rebellion and revolution; an examination of Chinese erotic life; short stories; some contemporary literature from Red China and Taiwan. (This course will not satisfy foreign language requirements. No knowledge of Chinese is required. All work is done in English.)

311 The Humanist Quest in French Literature. Semester course; 3 lecture hours. 3 credits. A study of the developing concept of humanism in French literature from the Middle Ages to the end of the eighteenth century. (This course will not satisfy foreign language requirements. No knowledge of French is required. All work is done in English.)

312 Revolt and Renewal in Modern French Literature. Semester course; 3 lecture hours. 3 credits. A study of the twin themes of revolt and renewal in French literature of the nineteenth and twentieth centuries. (This course will not satisfy foreign language requirements. No knowledge of French is required. All work is done in English.)

321 Early German Literature. Semester course; 3 lecture hours. 3 credits. Changing perspectives in German literature from its pagan beginnings, through the Medieval Golden

Age, Baroque extremism, the Enlightenment, and Storm and Stress up to Classicism and Goethe's *Faust*. Treatment of *The Nibelungenlied*, the courtly epic, *Simplicissimus*, and selections by Lessing, Schiller, and Goethe. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

322 Modern German Literature. Semester course; 3 lecture hours. 3 credits. Growing psychological awareness and alienation of the individual in German literature of the nineteenth and twentieth centuries. Representative works chosen from among writers of the past century and such modern writers as Thomas Mann, Kafka, Hesse, Brecht, Boll, and Grass. (This course will not satisfy foreign language requirements. No knowledge of German is required. All work is done in English.)

391 Topics in Foreign Literature in English Translation. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a total of 12 credits. An in-depth study of selected topics in foreign literature. (This course will not satisfy foreign language requirements. No knowledge of a foreign language is required. All work is done in English.)

492 Independent Study. Semester course; 1, 2, or 3 credits, maximum three credits per semester; maximum total of all FLT independent study courses six credits. Open generally only to students of junior or senior standing who have acquired at least 12 hours in any literature courses. Determination of course content and permission of the instructor and department chairman must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest and for which they have the necessary background.

COURSES IN FRENCH (FRE)

101–102 Elementary French. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate French. Semester course; 3 lecture hours. 3 credits. Intensive review of the essentials of grammar, with continued emphasis on oral, reading, and writing skills.

NOTE: In order to complete French through the intermediate level, a student may select French 202 or 205.

202 Intermediate French Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: FRE 201 or the equivalent. Designed to increase the student's reading ability through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: FRE 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. First semester: through the eighteenth century. Second semester: nineteenth and twentieth centuries.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: French through the intermediate level or the equivalent. A sys-

tematic review of French grammar with emphasis on the elements of style and vocabulary building; translation and composition.

305 French Conversation. Semester course; 3 lecture hours. 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 French Civilization I. Semester course; 3 lecture hours. 3 credits. Conducted in French. Prerequisite: French through the intermediate level or the equivalent. A survey of the civilization and culture of France from the origins to the French Revolution.

307 French Civilization II. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. Conducted in French. A treatment of French culture from the Napoleonic era to the present with a particular focus on the French-speaking countries.

311 French through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media: newspapers, magazines, films, slides, and radio broadcasts.

314 Commercial French. Semester course; 3 lecture hours. 3 credits. Prerequisite: French through the intermediate level or the equivalent. The course will develop the student's ability to use the French language as a means of oral and written communication in the business world. Particular emphasis will be given to the study of the technical tools necessary for the task of translating in specialized fields. This course may be used to satisfy degree requirements for the B.A. in French only within Track Three, the preprofessional track.

NOTE: FRE 301, 302, or 303, 304 are prerequisite to all of the following courses.

411 The Middle Ages. Semester course; 3 lecture hours. 3 credits. Reading and discussion of the following: *La Chanson de Roland*, Chretien de Troyes, *Erec et Enide*; *Aucassin et Nicolette*; Villon.

412 The Sixteenth Century. Semester course; 3 lecture hours. 3 credits. A study of the Rhetoriqueurs; Rabelais; the Court of Francis I; the Pleiade; selections from Montaigne's *Essais*; the Baroque poets.

413 The Seventeenth Century. Semester course; 3 lecture hours. 3 credits. Conducted in French. Baroque and Classical readings including prose, poetry and drama of the authors of the reign of Louis XIV; Pascal, La Rochefoucauld, La Bruyere, Corneille, Racine, and Moliere.

416 The Eighteenth Century. Semester course; 3 lecture hours. 3 credits. Principal movements in the various genres; the "philosophies;" the growth of liberalism as reflected in the literature of Montesquieu, Voltaire, Diderot, and Rousseau. Readings from Marivaux, Prevost, and Vauvenargues.

417 The Nineteenth Century. Semester course; 3 lecture hours. 3 credits. A detailed study of the major movements in nineteenth-century French literature: *Romanticism*—Chateaubriand, Lamartine, Hugo, Balzac, and Stendhal;

Realism-Flaubert; *Naturalism*-Zola; and *Symbolism*-Baudelaire, Verlaine, Rimbaud, and Mallarmé.

420 The Twentieth Century. Semester course; 3 lecture hours. 3 credits. Readings and discussion of the novel from Proust to the "nouveau roman," of the drama from Surrealism to Antitheatre, and of poetry from Symbolism to contemporary poets.

491 Topics in French. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a total of six credits. An in-depth study of selected topics in French. See Schedule of Classes for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum three credits per semester; maximum total for all independent study courses in French six credits. Open generally only to students of junior or senior standing who have six credits of upper-level French courses and/or have a demonstrated competency in the language. Determination of course content and permission of the instructor must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSES IN GEOGRAPHY (GEO)

102 Introduction to Cultural Geography. Semester course; 3 lecture hours. 3 credits. An introduction to the way in which man has modified his world, emphasizing the patterns of migration, the livelihoods of man, and the environments in which these modifications took place and continue to occur.

131 The Geography of ____. Semester course; 1 lecture hour. 1 credit. Covering a particular nation or restricted world region, each course will emphasize the area's present-day level of development and the problems affecting the area's stability and growth.

191 Topics in Geography. Semester course; 1-3 lecture hours. 1-3 credits. 15 contact hours per credit. May be repeated with different topics for a maximum of three credits. An introductory course in a selected topic in geography. See Schedule of Classes for specific topics to be offered each semester.

203, 204 Physical Geography. Semester courses; 3 lecture hours. 3, 3 credits. Analysis of the interrelated systems of the earth. First semester: the earth in space, atmosphere, climate, natural vegetation, soils. Second semester: landforms, hydrology, oceanography. Physical Geography Laboratories L203, L204 are optional.

L203, L204 Physical Geography Laboratory. Semester courses; 2 laboratory hours. 1, 1 credits. Prerequisite or co-requisite: GEO 203 for L203, GEO 204 for L204. Optional. First semester: the earth in space, map reading, climates, vegetation, soils. Second semester: landforms, geologic maps, hydrology, oceanography.

207, 208 World Regions. Semester courses; 3 lecture hours. 3, 3 credits. An examination of the various regions of the earth, including land forms, climate, resources, peoples, agriculture, and urban conditions. First semester: Anglo-America, Latin America, Western Europe, Eastern Europe, USSR. Second semester: Middle East and North Africa,

Africa (south of the Sahara), Indian Subcontinent, China, Japan, Southeast Asia, Oceania.

311/ANT 311, 312 History of Human Settlement. Semester courses; 3 lecture hours. 3, 3 credits. A cultural geography of man's diffusion over the earth, agricultural and urban systems, exploration, migration and colonization, and changing attitudes toward the environment. First semester: before 1750. Second semester: during and since the Industrial Revolution.

322 World Political Geography. Semester course; 3 lecture hours. 3 credits. A study of geographic factors in world power and international affairs, including such topics as resources, national unity, boundaries, etc. Specific areas of international tension may also be considered.

333/Afro-American Studies 333 Geography of Africa. Semester course; 3 lecture hours. 3 credits. A study of the land forms, climate, peoples, boundaries, trade, and cultural groupings of the African continent.

334 Regional Geography of ____. Semester course; 3 lecture hours. 3 credits. A study of the land forms, climate, resources, peoples, agricultural and urban conditions in a specific region such as North America, Europe, Latin America, the Middle East and India, the USSR, and Eastern Europe. See Schedule of Classes for specific region to be studied each semester.

391 Topics in Geography. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics to a maximum of nine credits. An in-depth study of a selected topic in geography. See Schedule of Classes for specific topics to be offered each semester.

450 Physical Geography of Virginia. Semester course; 6 field/lecture hours. 3 credits. Prerequisite: upper-division standing or permission of instructor. Field course, traversing the varied physical regions of Virginia with emphasis on the climate, terrain, soils, and vegetation of each region, and on the transitional zones in between. Human modification of the physical environment and its consequences are stressed also.

451 Cultural Geography of Virginia. Semester course; 6 field/lecture hours. 3 credits. Prerequisite: upper-division standing or permission of instructor. Field course, traversing the various cultural regions of Virginia with emphasis on the basic economic activities of each area, the cumulative effect of human occupancy on the regions, and past and present changes in the cultural landscape.

460 Richmond and Its Environs. Semester course; 4 field/lecture hours. 3 credits. Prerequisite: upper-division standing or permission of instructor. An analysis through lectures, discussions, and field trips of Richmond's physical characteristics (its site); relationship with the counties surrounding it (its situation); and the changes in its site and situation caused by cultural, economic, historical, and physical factors.

492 Independent Study. Semester course; variable credit, 2-4 credits per semester; maximum total of six credits. Open generally only to students of junior or senior standing. Determination of the amount of credit and permission of instructor and department chairman must be obtained prior to registration for the course. To be eligible, students must have 12 credits in geography or in geography and geology.

COURSES IN GERMAN (GER)

101-102 Elementary German. Continuous courses; 5 lecture/recitation hours. 4-4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate German. Semester course; 3 lecture hours. 3 credits. Intensive review of the essentials of grammar, with continued emphasis on oral, reading, and writing skills.

NOTE: In order to complete German through the intermediate level, a student may elect German 202 or 205.

202 Intermediate German Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: GER 201 or the equivalent. Designed to increase the student's proficiency in German through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: GER 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in German. Prerequisite: German through the intermediate level or the equivalent. First semester: beginnings of German literature through the literature of the first half of the nineteenth century. Second semester: contemporary German literature.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: German through the intermediate level or the equivalent. A systematic review of German grammar with emphasis on the elements of style and vocabulary building.

305 German Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Conducted in German. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 German Civilization I. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Conducted in German. A survey of German and Austrian culture from their origins to the founding of the German Empire in 1871.

307 German Civilization II. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. German 306 recommended. Conducted in German. A treatment of German and Austrian culture from the founding of the German Empire in 1871 to the present. Particular emphasis on life in modern-day Austria, the Federal Republic of Germany, and the German Democratic Republic.

311 German Through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media: newspapers, magazines, films, slides, radio broadcasts.

314 Commercial German. Semester course; 3 lecture hours. 3 credits. Prerequisite: German through the intermediate level or the equivalent. Designed to develop the

student's ability to use German as a means of oral and written communication in the business world. Emphasis on the acquisition of technical tools necessary for business exchanges in specialized fields.

NOTE: GER 301, 302, or 303, 304 are prerequisite to all of the following courses.

416 The Age of Goethe. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course centering on the major movements during Goethe's lifetime: enlightenment, storm and stress, classicism, and romanticism.

417 Literature of the Nineteenth Century. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course covering the period of romanticism, *Biedermeier* and *Junges Deutschland*, and the periods of realism and naturalism.

420 Literature of the Early Twentieth Century. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course dealing with the major authors of the periods of impressionism, expressionism, and *neue Sachlichkeit* during the first half of the twentieth century.

421 Modern Literature. Semester course; 3 lecture hours. 3 credits. Conducted in German. A course dealing with the literature of the post-war period leading up to the present.

491 Topics in German. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum of six credits. An in-depth study of selected topics in German. See Schedule of Classes for specific topics to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum three credits per semester; maximum total for all independent study courses in German six credits. Open generally only to students of junior or senior standing who have six credits of upper-level German courses and/or have a demonstrated competency in the language. Determination of course content and permission of the instructor must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSES IN GREEK (GRE)

101-102 Classical Greek. Continuous course; 3 lecture hours. 3-3 credits. Introduction to Classical Greek, with readings in Greek and English from representative authors of the Classical period.

201-202 Readings in Classical Greek. Continuous course; 3 lecture hours. 3-3 credits. First semester: selections from the literature of tragedy and the lyric writings of Sophocles, Euripides, Sappho, and Archilochus. Second semester: readings of selected Golden Age works of Aeschylus and Pindar.

COURSES IN HEALTH SCIENCES (HES)

101 Introduction to Health Related Professions. Semester course; 2 lecture hours. 1 credit. A study of the various health professions, their educational requirements, the duties involved, and their role in the health care team.

COURSES IN HISTORY (HIS)

101, 102 Introduction to European History. Semester

courses; 3 lecture hours. 3, 3 credits. A survey of the development of European civilization. First semester: to sixteenth century. Second semester: sixteenth century to the present.

103, 104 Introduction to American History. Semester courses; 3 lecture hours. 3, 3 credits. The history and civilization of the United States from the Age of Discovery to the present, with emphasis on the forces and processes that were major influences in the development of American institutions and ideas. First semester: to Reconstruction. Second semester: Reconstruction to present.

105, 106/Afro American Studies 107, 108 Introduction to African History. Semester courses; 3 lecture hours. 3, 3 credits. An overview of African civilization from pre-history to the present, with emphasis on cultural developments as well as selected in-depth analyses of specific issues in African history. First semester: to 1800. Second semester: since 1800.

107, 108 Introduction to Asian History. Semester courses; 3 lecture hours; 3, 3 credits. A survey of the development of the distinctive East Asian civilizations, with emphasis on China and Japan and the Southeast Asian states which combine Chinese and Indian influences.

109, 110 Introduction to Latin American History. Semester courses; 3 lecture hours. 3, 3 credits. A survey of the history of the nations of Latin America from Indian civilizations to the present day. The first semester will go through the movements for independence ending in 1824. The second semester will cover the period since independence, 1824 to the present.

191 Topics in History. Semester course; 3 lecture hours. 3 credits, maximum 6 credits. An in-depth study of a selected topic of continuing historical interest. See Schedule of Classes for specific topics to be offered each semester.

301, 302/Religious Studies 315, 316 The Ancient Near East. Semester courses; 3 lecture hours. 3, 3 credits. A study of the ancient Near Eastern civilizations of Mesopotamia, Egypt, Anatolia, and Syria-Palestine, from the preliterary period to that of the Archaemenid Empire of the Persians. First semester: preliterary period to the end of Kassite rule in Babylonia (c. 1160 B.C.). Second semester: the rise and fall of the great Neo-Assyrian, Neo-Babylonian, Hebrew, and Persian Empires (c. 331 B.C.).

303 Greek Civilization. Semester course; 3 lecture hours. 3 credits. A study of the unique cultural heritage of Greece and the historical patterns that rose from it, from the Heroic Age to the urban worlds after Alexander, 1400 B.C.-146 B.C.

304 Roman Civilization. Semester course; 3 lecture hours. 3 credits. A study of Roman history as it derived from Roman cultural institutions, from the Etruscan period through the conflict of the pagan and Christian worlds and advent of the barbarians, 753 B.C.-A.D. 454.

305 Introduction to Greek Archaeology. Semester course; 3 lecture hours. 3 credits. Selected centers of civilization in prehistoric, classical, and Hellenistic Greece: their rise, destruction, or renewal by urban planning; the history of classical archaeology, its growth, and impact on modern European art. Emphasis is on the living context of mature and complex peoples: Crete, Mycenaean, Classical, and Hellenistic Greece.

306 The Early Middle Ages. Semester course; 3 lecture hours. 3 credits. A topical, thematic, integrative, and problems approach to the emergence of a distinctive European community during the period frequently alluded to as the "dark ages."

307/Religious Studies 308 The High Middle Ages. Semester course; 3 lecture hours. 3 credits. A detailed historical analysis of the Gregorian Revolution, the Crusades, the Twelfth Century Renaissance, the Thomistic World, and the death of Medieval civilization.

308 Europe in Renaissance. Semester course; 3 lecture hours. 3 credits. Examination of the political, economic, social, cultural, and religious dimensions of the Italian and Northern European Renaissances.

309/Religious Studies 309 The Reformation. Semester courses; 3 lecture hours. 3 credits. A careful and intensive inquiry into the spiritual and material forces and people involved in the reformation of Christendom in sixteenth century Europe.

310 Europe in Absolutism and Enlightenment, 1648-1815. Semester course; 3 lecture hours. 3 credits. Examines the political, social, and economic orders of Old Regime Europe in the context of their increasing contradictions; introduces the cultural and intellectual forces that helped challenge that regime; culminates in the French Revolution and Napoleon.

311 The Zenith of European Power, 1815-1914. Semester course; 3 lecture hours. 3 credits. A study of the period in which the nations of Europe reached their height of world power between the reconstruction of Europe after the Napoleonic Wars and the eve of World War I. Topics will include the rise of nationalism, liberalism, and socialism; the spread of capitalism and industrial society; the beginnings of mass politics; the new imperialism; the diplomatic revolution in the European state system before World War I.

312 The Age of Total War: Europe, 1914-1945. Semester course; 3 lecture hours. 3 credits. A study of the transformation of European society precipitated by World War I and World War II. Emphasis will be placed on the origin, nature, and repercussions of total war; the crisis of democracy and the rise of modern dictatorships; changes in political, economic, and social institutions; and the decline of European power.

313 Post-War Europe, 1945 to the Present. Semester course; 3 lecture hours. 3 credits. An examination of Europe's social, economic, and political recovery after World War II and of the transformation of Europe from the center toward the periphery of world power.

315, 316 History of France. Semester courses; 3 lecture hours. 3, 3 credits. First semester: history of France from Gallo-Roman times through the French Revolution and the Napoleonic era. Second semester: from 1815 to the present.

317, 318 History of Germany. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the rise of Prussia, decline of the Holy Roman Empire, and the German Confederation up to 1870. Second semester: Bismarck's Empire, the World Wars, Nazism, and post-1945 Germany.

319, 320 History of England. Semester courses; 3 lecture hours. 3, 3 credits. The origin, rise, and growth of Britain. Emphasis upon the development of English political ideas

and institutions, and the significance of Britain in world affairs. First semester: earliest records to the Restoration. Second semester: the Restoration to the present.

321, 322 History of Russia. Semester courses; 3 lecture hours. 3, 3 credits. Russian history from its origins to the present, emphasizing the development of political and social institutions and Russia's unique position between Europe and Asia. First semester: origins to 1861. Second semester: 1861 to the present.

323 History of Spain and Portugal. Semester course; 3 lecture hours. 3 credits. A survey of the history of the Iberian peninsula from ancient times to the present, with an emphasis on the distinctive culture and attitude toward life that developed south of the Pyrenees.

324 The Holocaust. Semester course; 3 lecture hours. 3 credits. A multidisciplinary examination of the events leading to and culminating in the Nazi extermination of six million Jews; the historical settings of European Jewry and of German fascism; the role of traditional anti-Semitism; the psychology of aggressor and victim; the Holocaust in art and literature, and the moral implications for today.

325, 326 History of the Jewish People. Semester courses; 3 lecture hours. 3, 3 credits. A study of the Jewish people from the destruction of the Second Temple in 70 A.D. to the present. First semester: Judea in Roman times, the Diaspora in Islam and in Europe, social and cultural trends, and the impact of the Emancipation. Second semester: the rise of the American Jewish community, the impact of modernism and growth of Reform, the beginnings and growth of Zionism, restoration in Palestine, the Holocaust, the creation of Israel, and the relations of Israel and World Jewry.

327/Religious Studies 327 History of Christianity. Semester course; 3 lecture hours. 3 credits. A historical and theological examination of Christianity from its origin to the present. Emphasis will be upon an understanding of leading events, ideas, movements, and persons in their historical settings.

328 Modern Middle East. Semester course; 3 lecture hours. 3 credits. Analysis of the history, problems, and prospects of the nations and peoples of the Middle East with emphasis on developments since the Balfour Declaration of 1917.

329, 330 European Social History. Semester courses; 3 lecture hours. 3, 3 credits. Examines the institutions and structures of European society in the context of their changing interrelationships with politics, economics, ideas, and culture throughout European history. First semester: pre-industrial Europe; Second semester: the Industrial Age.

331 Nazi Germany. Semester course; 3 lecture hours. 3 credits. The origin and nature of Hitler's Third Reich. A study of the failure of the Weimar Republic; genesis of the Nazi racial ideology and party structure; the Nazi political, social, and cultural order after the seizure of power; Nazi foreign policy leading to war and genocide; and an analysis of the personality of Hitler.

332 History in Film. Semester course; 3 lecture hours. 3 credits. An examination of the uses and misuses of historical events and personalities in film. Lectures and readings will be used to analyze critically films dealing with biographies, events, and propaganda.

333 Economics 419 History of Economic Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201-202. A survey of the ideas of major economic contributors to modern economic thought. Theories of value, growth, and distribution from the eighteenth through the twentieth centuries will be presented.

334 Comparative History of Revolutions. Semester course; 3 lecture hours. 3 credits. An historical investigation of the causes, events, results, and interpretation of revolution, focusing upon such subjects as revolutionary change in the ancient and medieval worlds, and the revolutions of the modern age in England, France, Mexico, Russia, China, and Cuba. Emphasis is on historical comparisons and the specific revolutions examined may vary.

335/Economics 320 Economic History of Europe. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201-202 or 203. Studies of the origins and development of modern capitalistic economics with emphasis on transitional factors and institutional changes.

336 Modern European Intellectual History. Semester course; 3 lecture hours. 3 credits. An investigation of the main currents of European thought since 1750 which have shaped the contemporary mind. Emphasis on the interconnections between ideas and society placed in their historical contexts.

337/Art History 432 The Origins of Modernism, 1880–1930. Semester course; 3 lecture hours. 3 credits. An investigation of the interconnections between social, intellectual, and artistic change in Europe in the crucial period 1880–1930. Focus is placed on such major figures as Nietzsche, Freud, Einstein, Picasso, Duchamp, and Stravinsky in an attempt to locate the origins of contemporary artistic and intellectual experience.

338 History of Socialism. Semester course; 3 lecture hours. 3 credits. An examination of the roots of socialism in the cultural and religious tradition of the West, its development during Europe's industrialization, its present status, and the alternative it presents to capitalism.

339 History of Women. Semester course; 3 lecture hours. 3 credits. Through lecture, reading, and discussion, this course will attempt to trace and analyze historical changes in the economic, political, legal, and cultural position of women, including such topics as changing employment opportunities, the struggle for suffrage and political rights, and the history of social and sexual reform movements.

342 Colonial America, 1585–1763. Semester course; 3 lecture hours. 3 credits. An examination of the development of the 13 original colonies; the establishment and growth of society, politics, and the economy; and modification in the relationship between the provinces and Great Britain.

343 Two American Revolutions, 1763–1800. Semester course; 3 lecture hours. 3 credits. An examination of the late eighteenth century revolutions which molded the American political system — the revolution of colonial Englishmen against Great Britain and the revolution of the nationalists against the government established by the American Revolution, which produced and firmly established the United States Constitution.

344 Age of Jefferson and Jackson, 1800–1850. Semester course; 3 lecture hours. 3 credits. A survey of the major personalities and patterns in American history from the

presidential election of 1800 through the Compromise of 1850.

345 American Civil War, 1850–1865. Semester course; 3 lecture hours. 3 credits. An analysis of the coming and causes of the Civil War and of the events, personalities, and significance of the war itself.

346 The Maturing American Nation, 1865–1914. Semester course; 3 lecture hours. 3 credits. The history of the United States during the period 1865–1914 with emphasis on Reconstruction, industry, labor, agrarian movements, imperialism, and reforms.

347, 348 Twentieth Century U.S. History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the political, social, economic, and cultural history of the United States in the twentieth century, with emphasis on how the American people have responded to reform, war, prosperity, depression, international status, and changing relationships within government and society. First semester: to World War II. Second semester: since World War II.

351, 352 History of the South. Semester courses; 3 lecture hours. 3, 3 credits. A regional history placing particular emphasis upon the distinctive culture and problems of the South and its significance in the history of the United States. First semester: Old South, from colonial period to 1861. Second semester: New South, from 1865 to the present.

353, 354 Virginia History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the political, economic, and cultural developments in the colony and commonwealth of Virginia. First semester: Elizabethan period to 1789. Second semester: 1789 to the present.

355 Virginia and the Civil War. Semester course; 3 lecture hours. 3 credits. Although attention is given to the coming of disunion and war, the focus is on the major personalities, events, and patterns on the battlefield and on the homefront in the Old Dominion from 1861 to 1865.

356 Virginia Indians and Their Neighbors. Semester course; 3 lecture hours. 3 credits. An examination of the history of Virginia natives from 1585 to the present. Emphasis will be placed on the seventeenth century European contact period and on the Indian interactions with the English settlers. The interaction of other coastal peoples with the Europeans will be examined for comparisons.

357, 358 American Social History. Semester courses; 3 lecture hours. 3, 3 credits. The social life of Americans is examined in all periods of their history, focusing on the changing structure and functions of social institutions and thought. First semester: to 1876. Second semester: 1877 to the present.

359 The Military in American Life. Semester course; 3 lecture hours. 3 credits. Analysis of the evolution, status, and conduct of the armed forces of the United States from the colonial period to the present. Emphasis will be placed on the changing nature of American military thought and institutions, their performance in peace and war, and their relationship to civilian authority.

360 American Ethnic History. Semester course; 3 lecture hours. 3 credits. A history of immigrant groups in the United States and their impact upon the economic, political, and social mainstream of American life.

361, 362/Afro American Studies 361, 362 Americans

from Africa. Semester courses; 3 lecture hours. 3, 3 credits. A study of the history and culture of blacks in the United States, designed to analyze some of the most important aspects of black life and the attitudes of the dominant society within which blacks lived. The second semester emphasizes the changing status, expectations, and ideologies of black Americans in the twentieth century. First semester: to 1877; Second semester: since 1877.

363, 364 History of the American Urban Experience. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the evolution of colonial towns into industrial metropolises will be examined, placing emphasis on how this change determined contemporary conditions in American cities. Second semester: an examination of post-1880 urban developments (including suburbanization) emphasizing twentieth-century reformers' and intellectuals' efforts to understand and improve contemporary cities.

365, 366 American Intellectual History. Semester courses; 3 lecture hours. 3, 3 credits. The development of American thought and attitudes, with emphasis on trends in social and religious ideas, the rise of educational and cultural institutions, and expressions in literature and the arts. First semester: Colonial period to 1860. Second semester: 1860 to the present.

369, 370 American Constitutional and Legal Development. Semester courses; 3 lecture hours. 3, 3 credits. An analysis of the development of American constitutionalism and of concomitant legal developments, emphasizing judicial review, the relationship between the Constitution and modern industrialized society, and civil rights, as well as the growth of case law and the rise of the legal profession.

374 History of the American Frontier. Semester course; 3 lecture hours. 3 credits. A survey of the western movement in the United States from the time the first outposts were established to the end of the frontier in the nineteenth century. Particular attention to the influence of the frontier upon the American mind and ideals.

375, 376 American Diplomatic History. Semester courses; 3 lecture hours. 3, 3 credits. A study of the role of the United States in international relations. Emphasis will be placed on institutional and theoretical development and continuity as well as the role of the individuals. First semester: to 1900. Second semester: since 1900.

377/Economics 319 Economic History of the United States. Semester course; 3 lecture hours. 3 credits. A study of American economic development from colonial beginnings to the present, treating such topics as agriculture, industry, commerce, finance, economic causes and effects of wars, interrelationships of government and business, role of the entrepreneur, and the economic basis of cultural progress.

378 History of Central America. Semester course; 3 lecture hours. 3 credits. An exploration of the history of the region beginning with pre-Hispanic Indian civilizations and continuing to the present. Topics to be studied include the Spanish conquest, the liberal-conservative struggle, U.S. gunboat diplomacy, the Sandinista Revolution, civil war in El Salvador, militarism in Guatemala, and democracy in Costa Rica.

381, 382 Modern China. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the Confucian culture state under Ch'ing, confrontation with the West, and col-

lapse (1644–1900). Second semester: intellectual, political, and social revolution; emergence and development of the People's Republic.

383 Ancient Egypt. Semester course; 3 lecture hours. 3 credits. A general survey of the history and culture of ancient Egypt from the Predynastic period through the age of the New Kingdom. In addition to the historical reconstruction, emphasis will be placed on the art, literature, and religion of each of the major periods.

384 Latin America and World Affairs. Semester course; 3 lecture hours. 3 credits. A survey of the relation of Latin America since the sixteenth century to major world developments which have occurred and in which Latin America was involved.

385 History of Mexico. Semester course; 3 lecture hours. 3 credits. A study of Mexico and its culture, including early Indian civilizations, Spanish conquest, colonial period, independence, struggle for reform, revolution, and development as a modern state.

386 History of Brazil. Semester course; 3 lecture hours. 3 credits. A survey of the development of Brazilian culture and institutions from the Portuguese occupation of eastern South America through the Colonial period, independent empire, and the republic to the present time.

387/Afro-American Studies 387 History of West Africa. Semester course; 3 lecture hours. 3 credits. A study of the transformation of West African societies from the iron age to modern, independent nation-states, with stress on the roles of reforming Islam, European economic and cultural influences, and European colonialism.

388/Afro-American Studies 388 History of Central and East Africa. Semester course; 3 lecture hours. 3 credits. A history of the broad Bantu, Nilotic, and Cushitic middlebelt of tropical Africa from the European invasion to the present, emphasizing the factors leading to the development of modern nation-states and the problems which beset these nations today.

389/Afro-American studies 389 History of Southern Africa. Semester course; 3 lecture hours. 3 credits. A study of the history and culture of the peoples of southern Africa. Deals with the areas which presently are the Republic of South Africa, Lesotho, Swaziland, Botswana, Namibia, and Zimbabwe. Emphasizes the interaction among the various communities and ethnolinguistic groups in southern Africa.

391 Topics in History. Semester course; 1, 2, or 3 lecture hours. Variable credit. May be repeated with different topics for a maximum of nine credits. An in-depth study of a selected topic in history. See Schedule of Classes for specific topics to be offered each semester.

403/Religious Studies 403 History of Western Religion. Semester course; 3 lecture hours. 3 credits. A study of the development of religious thought and action in Western culture, including the Medieval, Reformation, Counter-Reformation, and Modern periods.

461-462 Archival and Historical Administration. Continuous course; 3 lecture and 3 workshop hours. 3-3 credits. First semester: an examination of the development of archival administration with emphasis on modern techniques and practices of archival and historical administration. Second semester: workshop in which each student will receive on-the-job training in various phases of archival administration.

483 Museum Methods. Semester course; 3 lecture hours. 3 credits. Practical presentation of techniques of working museums, presented in conjunction with local or regional museums.

485 Seminar in Historiography. Semester course; 3 lecture hours. 3 credits. May be repeated for a total of six credits with different topics. Introduction to questions in historiography, meaning, methodology, and interpretation in the teaching and writing of history.

486 Seminar in Historical Methodologies. Semester course; 3 lecture hours. 3 credits. An introduction to the various methodologies used in historical research and an analysis of their reliability and limitations: includes quantification, oral history, psychohistory, and cliometrics. See Schedule of Classes for each semester's offerings.

490 Seminar in History. Semester course; 3 lecture hours. 3 credits; maximum nine credits. Research and analysis of a selected historical topic in a seminar setting. See Schedule of Classes for each semester's offerings.

492 Independent Study. Semester course; variable credit. 2-4 credits per semester; maximum total of six credits. Open generally only to students of junior and senior standing who have acquired 12 credits in the departmental disciplines. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course.

493 Internship. Semester course; variable credit. 2-4 credits per semester; maximum total of six credits. Open generally to students of senior standing. Students receive credit for work on historical projects with approved agencies. Determination of the amount of credit and permission of departmental internship coordinator must be procured prior to registration for the course.

498 Honors Seminar in History. Semester course; 3 lecture hours. 3 credits; maximum six credits. Research and analysis of selected historical topics in a seminar setting. Open only to students in the history honors program.

COURSES IN HONORS (HON)

198 Freshman Honors. Semester course; 3 lecture hours. 3 credits; maximum total six credits. Prerequisite: permission of honors director. Course may be repeated once under different topic. An interdisciplinary course which will provide an intensive study of selected topics.

298 Sophomore Honors. Semester course; 3 lecture hours. 3 credits; maximum total six credits. Prerequisite: permission of honors director. Course may be repeated once under different topic. An interdisciplinary course which will provide an intensive study of selected topics. Appropriate prerequisites or co-requisites may be demanded.

398 Honors Topics. Semester course; 3 lecture hours. 3 credits; may be repeated with different topics. Prerequisite: permission of honors director. An in-depth study of selected topics. May be cross-listed with departmental courses. See Schedule of Classes for specific topics to be offered each semester. Appropriate prerequisite or co-requisites may be demanded.

399 Honors Modular Courses. Modular course — maximum 3 modules per semester; 3 lecture hours. 1.5 credits per module. Prerequisite: permission of the honors director or,

for individual modules, of the offering department. Intensive studies of units of knowledge from a wide spectrum of disciplines are undertaken. Each module is a complete course but all six offered in one academic year are related thematically. The following general themes have been established: Continuity and Change, 1986-87; Societal Control in the Twentieth Century 1987-88; and From Quackery to Cornerstone Theory 1988-89. Nine credits must be taken in honors modular courses to complete Honors Core. See Schedule of Classes for topics.

COURSES IN ITALIAN (ITA)

101-102 Elementary Italian. Continuous course; 5 lecture/recitation hours. 4-4 credits. Elementary grammar, reading, and oral drill.

201 Intermediate Italian. Semester course; 3 lecture hours. 3 credits. Intensive review of the essentials of grammar, with continued emphasis on oral, reading, and writing skills.

202 Intermediate Italian Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: ITA 201 or the equivalent. Designed to increase the student's proficiency in Italian through the study of selected cultural and literary texts.

205 Intermediate Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: ITA 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

305 Italian Conversation and Civilization. Semester course; 3 lecture hours. 3 credits. Conducted in Italian. Prerequisite: Italian through the intermediate level or the equivalent. Practice in the spoken language with emphasis on discussion dealing with Italian civilization and culture.

COURSES IN LANGUAGE SKILLS (LSK)

103/Linguistics 103 Introduction to Languages. Semester course; 3 lecture hours. 3 credits. A course designed to help students understand how languages function through a survey and contrastive analysis of language systems, with attention to the sociocultural, psychological, and historical aspects of languages. (Completion of this course does not qualify a student to take the 200 level of a language without passing a language placement test.)

203 Classical Elements in the English Language. Semester course; 3 lecture hours. 3 credits. Development of English vocabulary through a study of Greek and Latin elements in English: derivatives, roots, and loan words. Some emphasis on the special vocabularies of the sciences.

COURSES IN LATIN (LAT)

101-102 Elementary Latin. Continuous course; 3 lecture hours. 4-4 credits. First semester: a study of the Latin language with emphasis on the Latin elements found in English. Latin vocabulary. Second semester: introduction to Latin authors and related aspects of Roman civilization.

201-202 Readings in Latin Literature. Continuous course; 3 lecture hours. 3-3 credits. Brief grammar review with a parallel study of political and literary trends and

developments as found in several of the major Latin writers. First semester: prose, with emphasis on Cicero, Pliny the Younger, and Sallust. Second semester: poetry, with selected readings from Catullus, Tibullus, Ovid, and Vergil.

301, 302 Survey of Literature. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: LAT 201-202 or the equivalent. First semester: Latin prose authors such as Cicero, Pliny the Younger, Livy, Caesar, and Tacitus. Second semester: Latin poets such as Horace, Catullus, Ovid, and Vergil.

COURSES IN LIBRARY SKILLS (LRS)

101 Library Resources and Research Methods. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Designed for students at all levels who wish to improve their ability to use libraries in general and the VCU libraries in particular. The course emphasizes the use of the card catalog, bibliographies, indexes, abstracts, and other library resources. Directed to the individual student's subject interest as far as possible.

COURSES IN LINGUISTICS (LIN)

103/Language Skills 103 Introduction to Languages. Semester course; 3 lecture hours. 3 credits. A course designed to help students understand how languages function through a survey and contrastive analysis of language systems, with attention to the sociocultural, psychological, and historical aspects of languages. (Completion of this course does not qualify a student to enroll in the 200 level of a language without passing a language placement test.)

316/Spanish 316 Spanish Linguistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A study of Spanish phonetics with oral practice in pronunciation, an introduction to the history of the Spanish language, and a review of linguistics problems encountered in the teaching of Spanish.

403/Psychology 403 Introduction to Psycholinguistics. Semester course; 3 lecture hours. 3 credits. Method and theory in studying language behavior. Topics include the structure of communication using language, language acquisition, the role of language in thinking and remembering, and the relation of language to other ways of communicating.

438/Philosophy 438 Philosophy of Language. Semester course; 3 lecture hours. 3 credits. An examination of topics such as meaning, reference, synonymy, truth, and speech acts, with specific emphasis on their importance for the contemporary study of language.

***446/English 446 Nonstandard Urban Dialects.** Semester course; 3 lecture hours. 3 credits. An examination of the language of the inner city and the pedagogical problems involved in teaching standard English. Covers such topics as the phonology, syntax, and rhetoric of inner city nonstandard dialects. Primarily for prospective teachers.

***449/English 449 Introduction to Linguistics.** Semester course; 3 lecture hours. 3 credits. An introduction to methods of language analysis, emphasizing the study of sounds and sound patterns, and units of meaning and their arrangements. May not be used to satisfy the College of Humanities and Sciences requirement in English.

***450/English 450 Modern Grammar.** Semester course; 3 lecture hours. 3 credits. Study of modern English grammar and usage with some attention to linguistic theory. Recommended for teachers at all levels. May not be used to satisfy the College of Humanities and Sciences requirement in literature.

***451/English 451 History of the English Language.** Semester course; 3 lecture hours. 3 credits. The historical development of the English language; etymology, morphology, orthography, and semantics. May not be used to satisfy the College of Humanities and Sciences requirement in English.

453/English 453 Introduction to Modern Rhetoric. Semester course; 3 lecture hours. 3 credits. An introduction to the broad range of modern rhetorical theories, emphasizing their relationships and linguistics, literary criticism, and the process of writing. May not be used to satisfy the College of Humanities and Sciences requirement in English.

552/Education 552 Teaching English as a Second Language. Semester course; 3 lecture hours. 3 credits. Provides students who plan to teach English to people whose native language is not English with techniques used in teaching foreign languages. Contrastive analyses of morphology, phonology and syntax are used to isolate areas of difficulty in learning English.

COURSES IN MASS COMMUNICATIONS (MAC)

101 Mass Communications. Semester course; 3 lecture hours. 3 credits. The influence of, and techniques used by mass media, including ethical considerations. Origin of newspapers and periodicals and their evolution to mass circulation journalism of today. Structure, organization, management, content, and operation of radio, television, and motion picture industries. Attention is paid to roles of advertising and public relations.

181 Principles of Advertising. Semester course; 3 lecture hours. 3 credits. A survey of all forms of advertising, principles of layout copy; production methods; campaign preparation; media selection. (Not open to Mass Communications majors.)

203 News Writing. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisites: ENG 101-102, type-writing proficiency of 35 wpm and successful completion of a language skills test. Study and practice in fact gathering and development of the basic skills needed for writing for the media. Course will focus on newspaper writing and will stress grammar skills.

300 Mass Media Graphics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 203. A course on the functions of visual and graphic communication in news in the print and electronic media, involving creative typographic and layout design, pictures, and nonverbal elements of communication and perception.

303 General Assignment Reporting. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisite: MAC 203. Detailed study in gathering and reporting facts, with emphasis on clarity and maturity of writing. The intent is to build skills in interviewing, to provide practice in writing

general news and features, and to prepare for entry-level reporting assignments.

304 Reporting Public Affairs. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisite: MAC 303. Intensive study of the techniques of reporting meetings and news of public affairs. Attention will be paid to covering governmental agencies at all levels. Quality of writing will be a paramount and continual consideration.

305 Editing and Makeup. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisites: MAC 203 and 300. Practice in copyreading and editing news service and local copy. A study of editing practices and principles, picture usage. Some attention will be paid to makeup and design of leading American dailies.

320 Broadcasting for Public Relations. Semester course; 1 lecture and 1 laboratory hour. 1 credit. Prerequisite: MAC 203. A broad look at the skills needed and tools available in the broadcasting area for public relations professionals. Training in broadcast writing for radio and television and an introduction to hardware used in production will be provided.

323 Public Relations. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 203. Study of public relations principles and practices, with special attention to tools, media, responsibilities, and potentialities.

341 Feature and Article Writing. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 303 or 363 or permission of instructor. Practice in preparing articles and features for newspapers and magazines. Emphasis is on creative journalistic writing and development of writing skills.

361 Principles of Broadcasting. Semester course; 2 lecture hours. 2 credits. Prerequisites: MAC 101 and 203. A basic journalistic introduction to the principles of broadcasting, concentrating on the development of the medium and the issues it has faced in the past and in the present.

362 Newscasting. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Prerequisites: MAC 101 and 203; SPE 262. Concentrates on developing on-air skills in radio and TV studios and in field situations.

363-364 Broadcast News Writing and Reporting. Continuous course; 1 lecture and 4 laboratory hours. 3-3 credits. Prerequisite: MAC 203. In the first semester, students will concentrate on developing writing and reporting skills for radio. The second semester will sharpen and broaden those skills as they are applied to television news. **To be taken concurrently with MAC 365-366.**

365-366 Broadcast News Production. Continuous course; 1 lecture and 1 laboratory hour. 1-1 credit. Prerequisite: MAC 203. In the first semester students will work with a variety of equipment necessary for the production of news for radio. Students must own or have access to a professional-type portable tape recorder. In the second semester, students will work with equipment necessary for the production of news for television. **To be taken concurrently with MAC 363-364.**

375 Legislative Reporting. Semester course; laboratory. 1 credit. Prerequisite: MAC 303 or 363. Concentrated five-week course to permit advanced students to gain reporting experience with the Virginia General Assembly.

380 Introduction to Advertising. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 203. An overview of the advertising industry. A practitioner-oriented approach to the creation, preparation, and evaluation of advertising. The course views the subject from an advertising management perspective.

381 Advertising Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 203. Study of print and broadcast media and their relationship with the advertising industry. Media organization, costs, and sales procedures. Practical problems in selling and buying media.

391 Newspaper Advertising. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 203. A course in the preparation, placing, and proofing of advertising in daily and weekly newspapers. Its aim is to improve the appearance, effectiveness, and originality of newspaper advertising. Some attention is given to the organization and management of the advertising function in newspapers.

392 Advertising Copywriting. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 203. Study of the different types of advertising copy used by both local and national advertisers. Practice in writing consumer, trade, and industrial copy.

393 Television and Radio Advertising. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 203. Principles and practices of successful radio-television advertising; emphasis on media research, rate structure, and programming creativity in broadcast commercials.

394 Advertising Layout and Production. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC 392. Study and practice in layout and design of advertising for all media. Ideas will be followed through from concept to production.

403 Specialized Reporting. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisite: MAC 304. An advanced course to provide news beat experience for students reporting on the complexity of issues facing the public in the urban community.

404 Reporting in the Public Interest. Semester course; 1 lecture and 4 laboratory hours. 2 credits. Prerequisite: MAC 403. An advanced practicum in reporting a variety of complex news topics. Assignments will require in-depth research, numerous interviews, and use of public records.

405 Advanced Editing. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Prerequisite: MAC 305. An advanced course in editing to prepare students for work on copy desks and news desks of daily newspapers. Emphasis on fine points of editing and the layout of newspaper pages.

407 Newspaper Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 305. Newspaper operations from the standpoint of business and editorial supervision. A study of newspaper plants, advertising, circulation, and business.

408 Communication Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 203. Study of legal limitations affecting publishing, advertising, broadcasting, and telecasting, and legal philosophy and ethics relating to the media of communications.

423 Public Relations Campaigns. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 323 or permission

of instructor. Application of public relations theory and methods, including the planning process. Case studies and preparation of a plan for a public relations campaign.

425 Public Opinion. Semester course; 3 lecture hours. 3 credits. A study of the formation, reinforcement, and change of opinions and of the role of major social and political institutions and of the mass media in attitude change.

426 Editing PR Publications. Semester course; 2 lecture and 2 laboratory hours. 2 credits. Prerequisites: MAC 203 and 300. A concentrated editing course focusing on newsletters, magazines, and other publications produced by business, government, and nonprofit institutions.

443 Magazine Editing and Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 305. To prepare students for editing and management careers with industrial, consumer, governmental, trade, and other periodicals. All phases of magazine production will be included in the course.

461/Anthropology 461 The Documentary. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: MAC 363-364, 365-366, or permission of instructor. An examination of documentary concepts through analysis of radio, television, and film documentaries. The course will center on the development, writing, and production of a documentary in the medium (radio, television, or film) of the student's choice.

463-464 Radio and TV News Practicum. Continuous course; 2 lecture and 6 laboratory hours. 2-2 credits. Prerequisites: MAC 363-364 and 365-366. Using the city of Richmond as their laboratory, students will cover news events with TV cameras and various recording equipment as part of producing professional news reports for actual broadcast on radio and TV.

467 Broadcast Newsroom Management. Semester course; 3 hour seminar. 3 credits. Prerequisites: MAC 363-364 and 365-366. A study of studio organization, business demands, and managerial skills in operation of radio and television newsrooms from the standpoint of the news manager.

480 Media Strategy. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAC 381. Development of media strategies to accomplish advertising objectives. The evaluation of media vehicles in terms of creative requirements, budget limitations, audience characteristics, and cost efficiency.

481 Advertising Campaigns I. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 380 or permission of instructor. Introduction to the planning and preparation of advertising campaigns. Overviews the various steps in the development of an advertising campaign. Special stress placed on preparing students for MAC 482 Advertising Campaigns II.

482 Advertising Campaigns II. Semester course; 2 lecture hours. 2 credits. Prerequisite: MAC 481 or permission of instructor. Intensive study in the planning and preparation of advertising campaigns. Working as advertising agencies, students develop complete advertising programs including research, basic advertising plans, media and creative strategies, sales promotion, and merchandising plans.

486 Creative Advertising Workshops. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MAC

394 or permission of instructor. A concentrated study of principles of advertising message development. Creative strategies will be developed to accomplish advertising objectives. Students develop and defend campaign themes and message ideas including print layouts and television storyboards. Emphasis on creating messages for multi-media exposure.

489 Sales Promotion. Semester course; 3 lecture hours. 3 credits. Describes and analyzes sales promotion between the manufacturer and three other levels: the distribution system, the consumer, and the sales force. Effective use of special media, merchandising activities, and sales aids are also discussed.

491 Topics in Communications. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total 3 credits. Prerequisite: MAC 203 or permission of instructor. An intensive study of a specialized field of mass communications.

492 Seminar in Advertising in Society. Semester course; 3 lecture hours. 3 credits. An examination of the role of advertising in modern life in America in light of historical and recent development in advertising and distribution.

493 Field Work. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total 3 credits. Prerequisite: permission of school director. Selected students will receive on-the-job training under the supervision of an instructor and the employer. These internships are in newspapers, magazines, public relations and advertising, and radio and television news.

499 Problems and Issues in Mass Communications. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total three credits. Open only to students who have successfully completed at least 12 credits in mass communications. Determination of amount of credit and permission of instructor and school director must be obtained prior to registration for course. A concentrated examination of specific areas of mass communications. Each mini-course will be five weeks in length. Topics announced in advance.

MATHEMATICAL SCIENCES

Students registering for CSC 150, 201, 255, MAT 100, 111, 112, 115, 116, 200, 211, or STA 213 must have taken the VCU Mathematics Placement Test within the one-year period immediately preceding the beginning of the course. An exception to this policy is made in the case in which the stated alternative prerequisite course has been completed at VCU.

COURSES IN COMPUTER SCIENCE (CSC)

150 BASIC Computer Concepts. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: MAT 001 or satisfactory score on the Mathematics Placement Test. The BASIC language will be used to provide an introduction to understanding and programming digital computers. Several computer uses and their societal impact will be presented. Students may not receive degree credit for both CSC 150 and BUS 260.

191 Topics in Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the instructor. This course will teach selected topics in computer science. May be repeated for credit.

201-202 Introduction to Computing. Continuous course; 2 lecture and 3 laboratory hours. 3-3 credits. Prerequisite: MAT 101 or MAT/BUS 111 or a satisfactory score on the Mathematics Placement Test. Introduction to computing using the FORTRAN language. Design, analysis and testing of FORTRAN programs. Computer arithmetic and number representation. Use of FORTRAN-based application packages.

255-256 Structured Programming. Continuous course; 2 lecture and 3 laboratory hours. 3-3 credits. Prerequisite for CSC 255: MAT 101 or MAT/BUS 111 or a satisfactory score on the Mathematics Placement Test. Prerequisites for CSC 256: CSC 255 and MAT 211. Introduction to the concept and practice of structured programming using Pascal. Problem solving, top-down design of algorithms, control structures, procedures, array and character handling, sort and search algorithms, records, recursion, pointers, linked lists, stacks, queues, file processing, and program testing. (CSC 255 is a core course for Mathematical Sciences.)

301 Introduction to Discrete Structures. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 255 and MAT 211. A continuation of MAT 211. Recursion and induction. Operations on sets and relations. Formal languages with an emphasis on finite state automata and grammars. Monoids and graphs (trees in particular). Elementary combinatorics and advanced Boolean algebra.

311 Assembler Language. Semester course; 4 lecture hours. 4 credits. Prerequisite: CSC 201 or CSC 255. Introduction to and application of assembler language concepts and related topics such as internal data representation, addressing modes, registers, and macros.

312 Introduction to Operating Systems. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 311. Computer systems design, I/O processing, secondary memory organization, command languages, memory management, and job scheduling.

358 Computer Assisted Visual Design. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Co-requisite: CDE 437. Introductory study of the uses of computers as aids to generating images and solving design problems. Primarily for students in the School of the Arts. May not be used to satisfy a general education requirement in the College of Humanities and Sciences. May not be applied toward a major in mathematical sciences.

391 Topics in Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of the instructor. This course will teach selected topics in computer science. May be repeated for credit.

401 Data Structures and Algorithm Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 256 and CSC 301. Representations of trees and graphs. Storage systems and methods of storage allocation and collection. List structures, multi-linked structures. Search and sort techniques. Analysis of data manipulation algorithms.

403 Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 256 and CSC 301.

Survey of representative modern programming languages. Formal definition of programming languages including specifications of syntax and semantics. Precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages. Sub-routines, co-routines, and tasks. List processing, string manipulation, data description, and simulation languages. Run-time representation of program and data structures.

504 Compiler Construction. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 401 and 403. Review of programming language structures, translation, loading, execution, and storage allocation. Compilation of simple expressions and statements. Organization of a compiler. Use of bootstrapping and compiler writing languages.

505 Computer Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 312. Basic digital circuits. Combinational logic, data transfer, and digital arithmetic. Memory and memory access, control functions, CPU organization, microprogramming, input/output interfaces.

508 Data Base Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 401. Design and implementation of hierarchical, network, and relational data base systems. Relational algebra, normal forms, and normalization.

509 Artificial Intelligence. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 401 and CSC 403. Problem spaces, problem-solving methods, game playing, knowledge representations, expert systems, natural language understanding.

511 Computer Graphics. Semester course; 3 lecture hours. 3 credits. Prerequisites: CSC 256 and either MAT 307 or MAT 310. Mathematical techniques for picture development and transformation, curve and surface approximation and projections, graphical languages, and data structures and their implementation, graphical systems (hardware and software).

521 Introduction to the Theory of Computation. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 301. An introduction to automata theory, formal languages, and computability. Finite automata, pushdown automata, Turing machines, decidability, and computational complexity.

526 Theory of Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSC 403. An introduction to the formal semantics of programming languages, logic programming and functional programming. Denotational semantics, attribute grammars, Backus Normal Form Functional Programming, fixed point semantics, model-theoretic semantics, and PROLOG.

591 Topics in Computer Science. Semester course; 3 lecture hours. 3 credits. Prerequisites may vary. Permission of the instructor is required. Selected topics in computer science such as theory of data bases, information retrieval, and artificial intelligence. Course is open to qualified undergraduates. May be repeated for credit.

See also MAT 515–516 Numerical Analysis.

COURSES IN MATHEMATICS (MAT)

NO MORE THAN THREE CREDITS MAY BE EARNED FROM AMONG MAT 101, MAT 111/BUS 111, AND MAT 115.

100 Unitized Mathematics. Students requiring any of the mathematics courses numbered 001, 101, or 102 listed below, must register for MAT 100. On the basis of their background and placement examination scores, students will be assigned to an appropriate course.

001 Elementary Algebra. Semester course; 3 lecture hours or 3 laboratory-tutorial hours. No credit. Prerequisite: permission of the department. The purpose of this course is to provide laboratory and tutorial instruction for those seeking remediation or review of high school algebra. Topics include basic properties of real numbers, operations with algebraic expressions, solution of equations and inequalities, exponents and radicals, introduction to functions, and graphing.

101 College Algebra. Semester course; 3 lecture hours or 3 laboratory-tutorial hours. 3 credits. Prerequisite: MAT 001 or satisfactory score on the Mathematics Placement Test. Topics include solutions of equations, linear quadratic, and higher degree polynomials; inverse functions, exponential and logarithmic functions, systems of equations and inequalities; binomial theorems, sequences and series, complex numbers, permutations and combinations.

102 Trigonometry. 3 lecture hours or 3 laboratory-tutorial hours. 3 credits. Prerequisite: MAT 101 or a satisfactory score on the Mathematics Placement Test. Topics include circular functions, periodic functions, graphs, identities, inverse functions, solutions of equations, solutions of triangles, and complex numbers.

111/Business 111 Basic Mathematics for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: one year of high school algebra and a satisfactory score on the Mathematics Placement Test. Topics include sets, functions, exponents, logarithms, mathematics of finance, matrix algebra, systems of equations, and linear programming. Students may not receive degree credit for both MAT/BUS 111 and MAT 101.

112/Business 112 Elements of Calculus for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 101 or 111. Differential calculus and integral calculus.

115–116 Modern Elementary Mathematics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: one year of algebra, plane geometry, and a satisfactory score on the Mathematics Placement Test. Modern concepts of mathematics, history and development of number systems, algebra and geometry from the teacher's point of view. (Open only to majors in elementary, early childhood, and special education.)

191 Topics in Mathematics. Semester course; 1–3 credits per semester. A study of selected topics in mathematics. See Schedule of Classes for specific topics and prerequisites. May be repeated for credit. For a course to meet the general education requirements it must be so stated in the Schedule of Classes.

200–201 Calculus with Analytic Geometry. Continuous course; 4 lecture hours. 4–4 credits. Prerequisite for MAT 200: MAT 101 or satisfactory score on the Mathematics Placement Test (algebra portion). Prerequisites for MAT 201: MAT 200 and either MAT 102 or satisfactory score on the Mathematics Placement Test (trigonometry portion). Limits, continuity, derivatives, differentials, antiderivatives, and definite integrals. Applications of differentiation

and integration. Selected topics in analytic geometry. Infinite series.

211 Mathematical Structures. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 101 or a satisfactory score on the Mathematics Placement Test. An introduction to mathematical logic and set theory, including applications in Boolean algebras and graph theory. (A core course for mathematical sciences.)

291 Topics in Mathematics. Semester course; 1-3 credits per semester. A study of selected topics in mathematics. See Schedule of Classes for specific topics and prerequisites. May be repeated for credit.

301 Differential Equations. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. Solution of ordinary differential equations of first order. Linear differential equations with constant coefficients using operator methods. Series solutions and applications.

302 Numerical Calculus. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisites: CSC 201 or demonstrated knowledge of FORTRAN and MAT 201. An introduction to numerical algorithms for solving systems of linear equations, finding zeroes, definite integration, minimization, etc. Those features of FORTRAN that affect the precision of numerical computations will be included.

305 Elementary Number Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 211. Divisibility, congruences, Euler phi-function, Fermat's Theorem, primitive roots, Diophantine equations.

307 Multivariate Calculus. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. The calculus of vector-valued functions and of functions of more than one variable. Partial derivatives, multiple integrals, line integrals, surface integrals, and curvilinear coordinates. Lagrange multipliers; theorems of Green, Gauss, and Stokes. Applications.

309 Introduction to Probability Theory. Semester course; 3 lecture hours. 3 credits. Co-requisite: MAT 201. A study of the mathematical theory, including finite and infinite sample spaces, random variables, discrete and continuous distributions, mathematical expectation, functions of random variables, and sampling distributions.

310 Linear Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 201. Systems of linear equations, vector spaces, linear dependence, bases, dimensions, linear mappings, matrices, determinants, quadratic forms, orthogonal reduction to diagonal form, eigenvalues, and geometric applications.

327 Mathematical Modeling. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 200. Fundamental concepts of mathematical modeling. Differential equation models. Optimization models. Probabilistic models. Practical problems will be discussed throughout.

351 Applied Abstract Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 211. A survey of several areas in applied abstract algebra which have applications in computer science such as groups, codes, matrix algebra, finite fields, and advanced graph theory.

391 Topics in Mathematics. Semester course; 1-3 credits per semester. A study of selected topics in mathematics. See

Schedule of Classes for specific topics and prerequisites. May be repeated for credit.

437 Applied Partial Differential Equations. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 301 and 307. Parabolic (heat), hyperbolic (wave), and elliptic (steady-state) partial differential equations are studied. Solution techniques are demonstrated, including separation of variables and integral transforms. Practical problems and applications are emphasized.

492 Independent Study. Semester course; variable credit, 2, 3, 4 credits per semester; maximum four credits per semester; maximum total of six credits. Generally open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. The student must submit a proposal for investigating some area or problem not contained in the regular curriculum. The results of the student's study will be presented in a report.

493 Mathematical Sciences Internship. Semester course; the equivalent of at least 15 work-hours per week for a 15-week semester. 3 credits. Mathematical sciences majors only with junior or senior standing. Admission by permission from the department chairman. Through placement in a position in business, industry, government, or the university, the student will serve as an intern in order to obtain a broader knowledge of the mathematical sciences and their applications.

501 Introduction to Abstract Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 211 and 310. An introduction to groups, rings, and fields from an axiomatic point of view. Coset decomposition and basic morphisms.

505 Modern Geometry. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 307; co-requisite: MAT 310. Topics in Euclidean, projective and non-Euclidean geometries from a modern viewpoint.

507-508 Analysis I, II. Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 211, 307, and 310 or permission of instructor. Theoretical aspects of calculus: sequences, limits, continuity, infinite series, series of functions, integration, differential geometry.

509-510 General Topology I, II. Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: MAT 211 or equivalent. Foundations and fundamental concepts of point-set topology. Topological spaces, convergence, connected sets, compactness, product spaces, quotient spaces, function spaces, separation properties, metrization theorems, mappings, and compactification.

511 Applied Linear Algebra. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 310. The algebra of matrices, the theory of finite dimensional vector spaces, and the basic results concerning eigenvectors and eigenvalues, with particular attention to applications.

512 Complex Analysis for Applications. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 307. A rigorous development of those parts of the theory of analytic functions of a single complex variable which are prominent in applications.

515 Numerical Analysis I. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 302 or permission of

instructor. Solutions of equations, interpolation and approximation, numerical integration, iterative methods for solving linear equations, calculation of eigenvalues, and eigenvectors. Selected algorithms may be programmed for solution on computers.

516 Numerical Analysis II. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 515. Numerical solution of initial value problems in ordinary differential equations, 2 point boundary value problems. Introduction to numerical techniques for solving partial differential equations. Selected algorithms may be programmed for solution on computers.

517–518 Methods of Applied Mathematics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: MAT 301. Vector analysis, matrices, complex analysis, special functions. Legendre and Hermite polynomials, Fourier series, Laplace transforms, integral equations, partial differential equations, boundary-value and initial value problems.

520 Game Theory and Linear Programming. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 310. The mathematical basis of game theory and linear programming. Matrix games, linear inequalities and convexity, the minimax theorem, optimal strategies.

521 Introduction to Algebraic Number Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 501. Introduction to algebraic numbers and algebraic number fields with emphasis on quadratic and cyclotomic fields. Units, primes, unique factorization.

525 Introduction to Combinatorial Mathematics. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 211, 310, or permission of instructor. Introduction to the problems and methods of solution in the enumeration, existence, and construction of some discrete mathematical structures. Discussion of generating functions, recurrence relations, Ramsey's theorem, matching theory, combinatorial designs, Latin squares, and linear coding theory.

527–528 Mathematical Foundations of Operations Research. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: CSC 255 or 201, MAT 310 and 309 (second semester); STA 503 strongly recommended for second semester. Introduction to the mathematical foundations of deterministic and stochastic operations research, including the simplex method for linear programming, nonlinear optimization, dynamic programming, and some stochastic models. Real world applications will be discussed throughout.

530 The History of Mathematics. Semester course; 3 lecture hours. 3 credits. Prerequisite: 17 credits at the 200 level or above in the mathematical sciences or permission of the instructor. A general survey of the main trends in the development of mathematics from ancient times through the nineteenth century. The cultural and social contexts of mathematical activity will be considered. MAT 530 and 531 may not both be applied to a major in mathematical sciences.

531 Expositions in Modern Mathematics. Semester course; 3 lecture hours. 3 credits. Prerequisite: 6 credits at the 400 level or above in the mathematical sciences. A descriptive study of several major ideas relevant to present-day mathematics. Subjects will vary, but will usually include the following: the advent of pure abstraction, difficulties in the logical foundations of mathematics, the impact of mathematics and statistics on the twentieth century, and the computer revolution. MAT 530 and 531 may not both be applied to a major in mathematical sciences.

591 Topics in Mathematics. Semester course; 1-3 credits per semester. A study of selected topics in mathematics. See Schedule of Classes for specific topics and prerequisites. Open to qualified undergraduates. May be repeated for credit.

COURSES IN STATISTICS (STA)

212 Concepts of Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 200 or 211. An introduction to the nature of statistical thinking and the application of abstract systems to the resolution of nonabstract problems. Probability models for stochastic events. Parametric representations. Estimation, testing hypotheses and interval estimation with application to classical models. (A core course for mathematical sciences.)

213 Introduction to Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 101 of MAT/BUS 111 or a satisfactory score on the Mathematics Placement Test. Description of data, elementary probability, random sampling, estimation, and hypothesis testing for proportions and means; chi-square tests, or some other special application. (Not open to students in mathematical sciences.) Students may not receive degree credit for both STA 213 and BUS 301.

214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. A study of the nature and application of statistical methods including analysis of variance, regression, and correlation. Special topics include distribution free methods in various statistical problems. (Psychology majors see PSY 214; sociology, anthropology, and political science majors see SOC 214.)

291 Topics in Statistics. Semester course; 1-3 lecture hours. 1-3 credits per semester. A study of selected topics in statistics. Specific topics may fulfill General Education Requirements. See Schedule of Classes for specific topics and prerequisites.

321 Introduction to Statistical Computing. Semester course; 3 lecture hours. 3 credits. Prerequisite: STA 212, CSC 201 or CSC 255, and MAT 200, or their equivalents. An overview of topics central to the applications of computers in statistical practice: data storage and retrieval, data modification and file handling, use of statistical software (SAS, SPSS^x, BMDP, etc.), statistical algorithms, random number generation, and applications.

391 Topics in Statistics. Semester course; 1-3 lecture hours. 1-3 credits per semester. A study of selected topics in statistics. See Schedule of Classes for specific topics and prerequisites.

503 Introduction to Stochastic Processes. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 307 and 309. A continuation of topics given in MAT 309. An elementary introduction to stochastic processes and their applications, including Markov chains and Poisson processes.

513–514 Biostatistics 513–514 Mathematical Statistics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: MAT 307. Probability, random variables and their properties, distributions, conditional distributions, moment generating functions limit theorems, *estimators and their properties*, Neyman-Pearson, and likelihood ratio criteria for testing hypotheses.

523 Biostatistics 523 Nonparametric Statistical Methods. 3 lecture hours. 3 credits. Prerequisites: any two semesters of statistics or permission of instructor. Estimation and hypothesis testing when the form of the underlying distribution is unknown. One-, two-, and k-sample problems. Tests of randomness, Kolmogorov-Smirnov tests, and coefficients of association.

543-544 Biostatistics 543-544 Statistical Methods. 3 lecture hours. 3-3 credits. Prerequisite: graduate standing or one course in statistics and permission of instructor. Basic concepts of statistical methods, statistical measures, variation, distributions, tests of significance, analysis of variance, correlation and regression, analysis and design of factorial experiments, analysis of covariance. Includes use of statistical packages.

591 Topics in Statistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Permission of the instructor. Selected topics in statistics. Course open to qualified undergraduates. May be repeated for credit.

See also: **MAT 309 Introduction to Probability Theory.**

COURSES IN MILITARY SCIENCE (MIS)

101 Basic Military Science. Semester course; 2 lecture hours. 2 credits. Study of the United States Defense Department and the organization and structure of the Army.

102 Basic Military Science. Semester course; 3 lecture hours. 3 credits. American military history focusing upon the principles of war and how they were applied to the major conflicts in which the United States has been involved.

201 Basic Military Science. Semester course; 2 lecture hours. 2 credits. The fundamentals of emergency first aid and basic life-saving techniques, including cardiopulmonary resuscitation.

202 Basic Military Science. Semester course; 2 lecture hours. 2 credits. Principles of leadership and professional Army ethics.

203 Basic Military Sciences. Optional ROTC Basic Camp. 0-6 credits. Six weeks of training at a military installation. Travel pay and salary stipend provided through the military science department. Student not obligated to any military service. Basic Camp graduates are eligible to enroll in advanced military sciences courses.

Prerequisites for enrolling in advanced military science courses are successful completion of three basic military science courses or MIS 203 Basic Military Science for six credits. A military history course must be taken prior to beginning the advanced course.

For College of Humanities and Science majors, only three of the seven 300-level military science credits may be used in fulfillment of the 45 upper-level credit requirement for graduation.

301-302 Advanced Military Science. Continuous course; First semester: 2 lecture and 1 laboratory hour. 1 credit. Second semester: 2 lecture and 1 laboratory hour. 2 credits. Management principles and leadership; instructional methods; organization and function of Army branches; theory and dynamics of unit operations and exercise of command.

303-304 Advanced Military Science. Continuous course; 2 lecture and 1 laboratory hour. 2-2 credits. Staff organization and procedures, orders and operations, training management, logistics, military law, and the exercise of command.

306 Military Science. ROTC Advanced Camp. 0 credits. Prerequisite: MIS 302. The ROTC camp summer practicum is six weeks long. Individual and group experience for application of leadership training. Exposure to leadership situations which require decisions made under physical and mental stress conditions.

COURSES IN PHILOSOPHY (PHI)

103, 104 Introduction to the History of Western Philosophy. Semester courses; 3 lecture hours. 3-3 credits. A survey of the development of critical and speculative thought in the Western World. First semester: ancient Greek through Medieval; second semester: Renaissance through the nineteenth century.

205 Philosophical Issues. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. An introduction to traditional philosophical topics such as mind, nature, knowledge, our place in the world, society, and the social order.

211 Ethics. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 102 by course or placement. A study of the major ethical systems in Western philosophy such as those of Plato, Aristotle, Butler, Hume, Kant, Mill, and Nietzsche. The course will apply these theories to fundamental and enduring moral problems.

221 Critical Thinking. Semester course; 3 lecture hours. 3 credits. Prerequisite: ENG 101 by course or placement. An introduction to inductive and deductive reasoning, with emphasis on common errors and fallacies.

222 Formal Logic. Semester course; 3 lecture hours. 3 credits. Prerequisite: placement into MAT 101 or above. An evaluation of deductive arguments utilizing the methods of symbolic logic.

301 Mind and Reality. Semester course; 3 lecture hours. 3 credits. Prerequisite: 6 credits in philosophy or permission of instructor. An examination of central metaphysical issues, for example, the mind-body problem, free will, causality, action, realism, and the problems of universals.

302 Reason and Knowledge. Semester course; 3 lecture hours. 3 credits. Prerequisite: 6 credits of philosophy or permission of instructor. An examination of central epistemological issues, for example, the problem of justification, empirical knowledge, perception, rationality, and truth.

303 Language and Logic. Semester course; 3 lecture hours. 3 credits. Prerequisite: 6 credits in philosophy (including PHI 222, Formal Logic) or permission of instructor. An examination of central issues in the philosophy of language and logic, for example, the nature of meaning and reference, reductionism, properties of languages, and the character of artificial symbol systems.

320 Philosophy of Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing or permission of instructor. A critical examination of the nature of law and criminal justice in the light of important human values. The

following topics will be considered: the nature of law and legal reasoning, the legal enforcement of morality, and such controversies as punishment versus rehabilitation, and the right to due process versus the need for public safety.

326 Religious Studies, Existentialism. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. An examination of the nature of truth, freedom, responsibility, individuality, and interpersonal relations as found in some principal writings of Kierkegaard, Nietzsche, Jaspers, Sartre, Heidegger, Camus, Buber, Marcel.

327 Ethical Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHI 211 or permission of instructor. A study of the problems of philosophical ethics, including relativism, egoism, utilitarianism, intrinsic value, and the meaning and justification of ethical principles. Both historical and contemporary thinkers will be considered.

329 Business Ethics. Semester course; 3 lecture hours. 3 credits. A philosophical investigation of central ethical concepts as they apply to business practices, for example, the concepts of anatomy, equality, justice, and social responsibility. Specific ethical issues that arise in business will also be examined. These include preferential hiring, autonomy in the workplace, business and the environment, and corporate responsibility.

330 Medical Ethics. Semester course; 3 lecture hours. 3 credits. Prerequisite: sophomore standing. A philosophical examination of morally problematic areas in medicine: euthanasia, abortion, mental illness, human experimentation, genetic engineering, eugenics, informed consent, and the funding of health care.

331 Philosophy of Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: three credits of philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. An examination of the bases of scientific inquiry in both the natural and social sciences; including a study of such topics as hypothesis formation and testing, and the nature of scientific laws, theories, and explanations.

335 Social and Political Philosophy. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. A critical examination of political power and of the relationship between the individual and his society.

408/Religious Studies 408 Indian Tradition. Semester course; 3 lecture hours. 3 credits. A systematic analysis of the major theories of Indian religious and philosophical thought: Vedas, Upanishads, Gita, Charvaka, Jainism, Buddhism, the six systems of Hinduism, and contemporary development.

410/Religious Studies 410 The Chinese Tradition in Philosophy. Semester course; 3 lecture hours. 3 credits. A study of the development of Confucianism, of alternative ways of thought prior to the fall of the Han Dynasty, and of neo-Confucianism. The systems of thought are examined in the light of their social, political, and religious impact on China, Korea, and Japan.

412/Religious Studies 412 Zen Buddhism. Semester course; 3 lecture hours. 3 credits. A study of Zen Buddhism, including backgrounds in Indian philosophy and practice, development in China and Korea, and present day Zen theory and practice in Japan and in Western countries.

421, 422 Aesthetics. Semester course; 3 lecture hours. 3-3 credits. Prerequisite: 3 credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. A critical survey of aesthetics from antiquity to the twentieth century. First semester: antiquity to the Renaissance. Second semester: the Renaissance to the present. Topics to be considered include: the nature of art, aesthetic experience, the aesthetic object, and aesthetic judgments. Specific attention will be given to aesthetic analysis in the arts of painting, music, architecture, and the motion picture.

430 Religious Studies/Philosophy of Religion. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 credits in philosophy (exclusive of PHI 221 and PHI 222) or permission of instructor. An introduction to the major problems and questions of religion and reason. Special reference will be made to the nature of God, the nature of man, the problem of evil, the source of good, immortality, and the basis of authority.

440/Religious Studies 440 Mysticism. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in philosophy or religious studies. A critical analysis of the varieties of mysticism in world religions. Arguments for and against mysticism will be emphasized. Mysticism will be related to art, psychology, science, philosophy, theology, and magic.

491 Topics in Philosophy. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for maximum of six credits. Prerequisite: written permission of instructor. An in-depth study of an individual philosopher, a particular philosophical problem or a narrowly-defined period or school. See Schedule of Classes for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum four credits per semester; maximum total for all independent study courses six credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. An independent study course to allow interested majors in philosophy to do research, under the direction of a professor qualified in that field, in an area of major interest.

COURSES IN PHYSICS (PHY)

101 Foundations of Physics. Continuous course; 3 lecture hours. 3 credits. Introduction to the concepts of classical physics essential to the understanding of modern developments. See PHY 102. Presented within an historical and societal framework. For non-science majors. An optional laboratory may be taken with this course. See PHY L101.

L101 Foundations of Physics Laboratory. Semester course; 2 laboratory hours. 1 credit. Co-requisite: PHY 101. An optional laboratory consisting of experiments and activities correlated with PHY 101.

102 Frontiers of Physics. Continuous course; 3 lecture hours. 3 credits. Prerequisite: PHY 101. An introduction to the concepts of modern physics with applications to selected technologies and implications for tomorrow's world. For non-science majors. An optional laboratory may be taken with this course. See PHY L102.

L102 Frontiers of Physics Laboratory. Semester course; 2 laboratory hours. 1 credit. Co-requisite: PHY 102. An optional laboratory consisting of experiments and activities correlated with PHY 102.

103 Elementary Astronomy. Semester course; 3 lecture hours. 3 credits. A descriptive approach to astronomy dealing with basic features of our solar system, our galaxy, and the universe. Not applicable toward physics major requirements. An optional laboratory may be taken with this course. See PHY L103.

L103 Elementary Astronomy Laboratory. Semester course; 2 laboratory hours. 1 credit. Co-requisite or prerequisite: PHY 103. An optional laboratory course consisting of experiments and activities related to PHY 103.

105 Physical Geology. Semester course; 3 lecture hours. 3 credits. A descriptive approach to physical geology dealing with the history and structure of the earth, catastrophic events, and geology as it relates to the contemporary environment. Not applicable toward physics major requirement.

201–202 General Physics. Continuous course; 3 lecture and 3 laboratory hours. 4–4 credits. Prerequisite: MAT 101. First semester: basic concepts of motion, waves, and heat. Second semester: basic concepts of electricity, magnetism, light, and modern physics. Designed primarily for life-science majors. Not applicable toward physics major requirement.

207 University Physics I. Semester course; 4 lecture and 3 laboratory hours. 5 credits. Co-requisite: MAT 200. A vector- and calculus-based introduction to the fundamental concepts of mechanics, heat, and wave motion.

208 University Physics II. Semester course; 4 lecture and 3 laboratory hours. 5 credits. Prerequisite: PHY 207. Co-requisite: MAT 201. A vector- and calculus-based introduction to the fundamentals of electricity, magnetism, and optics.

291 Topics in Physical Science. Semester course; three lecture hours. 3 credits. An in-depth study of a selected topic in physics, astronomy, geology, meteorology, or oceanography. See Schedule of Classes for specific topics to be offered each semester.

301 Classical Mechanics I. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 208. Co-requisite: MAT 301. Introduction to the dynamics of a single particle.

302 Classical Mechanics II. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 301. Co-requisite: MAT 307. Introduction to rigid body dynamics and the dynamics of continuous media with particular emphasis on wave phenomena.

315 Energy and the Environment. Semester course; 3 lecture hours. 3 credits. Open to non-majors. Not applicable to the physics major. Prerequisite: junior or senior standing. Man and his physical environment; a semi-quantitative study of man's physical needs for energy and environmental problems associated with these requirements.

320 Introduction to Modern Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 208. Foundations of modern physics including special relativity, thermal radiation and quantization, wave-particle duality of radiation and matter. A continuation of PHY 208.

L320 Modern Physics Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite or co-requisite: PHY 320. Experimental work correlated with PHY 320.

322 Optics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 202 or PHY 208 or permission of instructor. An introduction to geometric, physical, and quantum optics.

330 Electrical Circuits. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Prerequisites: PHY 208 or PHY 202 and MAT 201 or permission of instructor. Simple AC and DC circuits emphasizing passive circuit elements.

331 Introductory Electronics. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: PHY 330 or permission of instructor. Active circuit elements including semiconductor devices, discrete and integrated linear circuits.

335 Microprocessor-based Instrumentation. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Co-requisite: PHY 330 or permission of instructor. Basic microprocessor architecture, machine and assembly language for input/output configuration, and introduction to interfacing.

340 Introduction to Statistical Physics and Thermodynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 301 or permission of instructor. Co-requisite: MAT 307. Introduction to classical thermodynamics, kinetic theory, and statistical mechanics.

350 Advanced Laboratory. Semester course; 3 laboratory hours. 1 credit. Prerequisite: PHY L320. Experiments with fundamental particles and radiation. May be taken for a maximum of 2 credits.

376 Electromagnetism. Semester course; 3 lecture hours. 3 credits. Co-requisite: PHY 301 or permission of instructor. Electrostatics, magnetism, and electromagnetic properties of matter.

380 Modern Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 301, 320, and MAT 301. Quantum mechanical phenomena with applications to atomic, solid, and nuclear systems.

391 Topics in Physics. Semester course; variable credit, 1–3 lecture hours. 1–3 credits per semester. Maximum total of 6 credits. Not applicable toward physics major requirement. In-depth study of a selected topic in physics or physics-related technology, usually at a level requiring only elementary algebra. See Schedule of Classes for specific topic(s), credit, and possible prerequisites.

397 Directed Study. Semester course; variable credit. 1–3 credits per semester; maximum of three credits applicable toward physics major requirement. Maximum total of 4 credits. Open to nonmajors. Determination of amount of credit and permission of instructor must be obtained before registration for course. Intended to allow nonmajors and majors to examine in detail an area of physics of physics-related technology not otherwise available in upper-level courses. May involve either directed readings or directed laboratory work.

407 Introduction to Material Science. Semester course; 3 lecture hours. 3 credits. Prerequisites: CHE 102 and PHY 320 or permission of instructor. A first course in the relation of physical and mechanical properties of materials to their structure and external conditions. Includes introductions to

crystallography, physical metallurgy, and ceramics with emphasis on industrial applications.

408 Physical Metallurgy. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHY 407 or permission of instructor. A course which investigates the origins of the structure and physical properties of metals and alloys. Topics include the metallic state, phase diagrams, diffusion of defects, physical properties, elastic and plastic deformations, and mechanical properties.

432 Digital Electronics. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: PHY 331 or permission of instructor. Discrete and integrated digital circuits; noise; electronic instrumentation for control and measurement.

440 Fundamentals of Solid State Physics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 380 and 376. Bonding and structure of crystals, theory of electrons in solids, lattice vibrations, transport properties.

490 Seminar in Physics. Semester course; variable credit. 1–2 credits per semester. Maximum total of 4 credits. Generally open only to physics majors with junior or senior standing. Investigation of a selected topic in a seminar setting. See Schedule of Classes for current offerings.

491 Topics in Physics. Semester course; 3 lecture hours. 3 credits; maximum of three credits applicable toward physics major requirement. Maximum total of 6 credits. An in-depth study of a selected topic in physics. See Schedule of Classes for specific topic(s) and prerequisites.

492 Independent Study. Semester course; variable credit. 1–3 credits per semester; maximum of 3 credits applicable toward physics major requirement. Maximum total of 8 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. Independent projects in experimental or theoretical physics.

571 Theoretical Mechanics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 301 and MAT 301 or permission of instructor. An introduction to advanced dynamics involving the Lagrangian and Hamiltonian formalisms.

576 Electromagnetic Theory. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 376 and MAT 301 or permission of instructor. Maxwell's equation of electromagnetism, vector and scalar potentials, electromagnetic waves, and radiation theory.

580 Quantum Mechanics. Semester course; 3 lecture hours. 3 credits. Prerequisites: PHY 380, MAT 301, or permission of instructor. Theoretical quantum descriptions with emphasis upon mathematical techniques. Schrodinger equation, hydrogen atom, eigenfunctions and eigenvalues, angular momentum and spin, and perturbation theory.

591 Topics in Physics. Semester course; 3 lecture hours. 3 credits. Open to graduate students and undergraduate students with advanced standing. Applicable towards physics major requirements. An indepth study of a selected topic in advanced physics. See Schedule of Classes for specific topic(s) and additional prerequisites.

With permission, the following courses may be taken by advanced undergraduates:

507 Materials Characterization
532 Introduction to Instrumentation
535 Advanced Interfacing
550 Graduate Laboratory
591 Topics in Physics

COURSES IN POLITICAL SCIENCE (POS)

101, 102 American Government. Semester courses; 3 lecture hours. 3–3 credits. A study of American national government focusing on its underlying political ideas, constitutional basis, major institutions, and their interactions in the determination of public policy. First semester: basic principles and theories of American government, development of the constitutional context, the federal system, political behavior, and the role of parties and interest groups. Second semester: structure, powers, and functions of presidency. Congress, Supreme Court, bureaucracy, and the process and content of domestic and foreign policy.

201 Introduction to Politics. Semester course; 3 lecture hours. 3 credits. This course will acquaint students with principles and concepts involved in the study of politics and with some basic similarities and differences between the major types of political systems. Some attention will also be devoted to political ideologies and to research methods applicable to political science.

202 Comparative Politics. Semester course; 3 lecture hours. 3 credits. Study of the nature and aims of comparative government, with emphasis on analytical concepts such as alienation, political socialization, political aggregation, and recruitment.

203 Issues in World Politics. Semester course; 3 lecture hours. 3 credits. An exploration of selected major issues in world politics at the present time. Emphasis will be on comprehending the nature, origins, and significance of each issue. The course will also examine efforts at dealing with the issues and possible alternative solutions.

214/Sociology 214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. The application of descriptive and inferential statistics for the social sciences.

301 American Parties and Elections. Semester course; 3 lecture hours. 3 credits. A study of the historical development, organization, and methods of political parties in the United States.

306 The Congress. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101 and 102. A study of the behavior of legislators and the structures and processes of legislative decision-making in the U.S. Congress. Analysis will include both the internal and external environment of congressional policy-making, and an assessment of the impact of congressional policy.

308 The Presidency. Semester course; 3 lecture hours. 3 credits. A political and institutional study of the chief executive, focusing especially on the presidential personality, his relations with Congress, the bureaucracy, the courts, and the shaping of domestic and foreign policy.

310 The National Policy Process. Semester course; 3 lecture hours. 3 credits. An analytical survey of policy formulation and operations of the United States Government at the national level, together with an examination of the impact of policy upon groups and individuals in American society.

311 Politics of the Environment. Semester course; 3 lecture hours. 3 credits. An exploration of the current controversy about environmental politics and the issues and crisis it centers on. Special attention will be given to the constitutional, political, and geographical factors in the development of environmental policy and the organized effort to deal with governmental actions and inaction and its impact on policy outcomes.

314 American Constitutional Law. Semester course; 3 credits. A survey of the development of the Constitution through judicial interpretation. Topics to be covered include an introduction to the operation of the Supreme Court, decisions on federalism, the powers of Congress, the president, and the judiciary and civil rights, and civil liberties.

315 Judicial Policymaking. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 314. A study of theories and models of judicial decision making in the Supreme Court, focusing on judicial structure and procedures, policy-making analysis, political ideology, and judicial activism.

316 Legal Rights and Responsibilities. Semester course; 3 lecture hours. 3 credits. A general survey of the most common legal problems facing the average citizen to aid in understanding basic fundamentals of law. Content to be designed to meet the interests of the class and to cover such topics as wills, personal liability, real property law, and legal protection of ideas, writings, and art.

320/Sociology 320 Research Methods in the Social Sciences. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Current methods of research in the social sciences.

321 Municipal Government and Administration. Semester course; 3 lecture hours. 3 credits. A study of the development, organization, and administration of cities in the United States. Special attention will be given to the problems and prospects of municipal government in Richmond and Virginia.

322 State and Local Government in the United States. Semester course; 3 lecture hours. 3 credits. A study of the organization, problems and politics of government and administration of the 50 states and their cities, counties, towns, and metropolitan areas, with special emphasis on the Virginia state and local government experience.

323 Virginia Government and Politics. Semester course; 3 lecture hours. 3 credits. A study of politics and government at the state and local level in Virginia. Topics include parties and political patterns; state and local government structure and process; political and governmental challenge of and response to urbanization, and patterns in selected policy areas.

327 Contemporary Urban Problems. Semester course; 3 lecture hours. 3 credits. A study of urban affairs with particular reference to complex urban problems. An inventory will be made of contemporary urban problems and of devices for dealing effectively with them. Special attention will be given to new concepts, such as multi-jurisdictional planning.

329 Intergovernmental Relations. Semester course; 3 lecture hours. 3 credits. An examination of the vertical and horizontal intergovernmental relations in the United States. Attention will be given to the major variants of federalism. The role of grants and revenue sharing in programmatic federalism will be assessed. Some conclusions on the future of intergovernmental relations will be advanced.

331 Public Administration. Semester course; 3 lecture hours. 3 credits. A study of the concepts and practices of public administration in the United States. Particular attention will be given to the administrative procedures and practices of the national government and of the government in Virginia.

334 Public Personnel Administration. Semester course; 3 lecture hours. 3 credits. An analysis of personnel management in government. Recruitment and selection, job and salary classification, work standards and training, and relations of public personnel to the executive and legislative branches of government will be included among the topics to be discussed.

341, 342 History of Political Thought. Semester courses; 3 lecture hours. 3-3 credits. A survey of political thought from the time of Plato to the present. First semester: leading political ideas of the ancient and medieval periods. Second semester: modern and contemporary thought.

343/Afro-American Studies 343 Black Political Thought. Semester course; 3 lecture hours. 3 credits. An historical and sociological perspective on the political and social ideas of black thinkers from David Walker to the present.

351 Governments and Politics of the Middle East. Semester course; 3 lecture hours. 3 credits. A comparative analysis of political systems in the Middle East including the study of contemporary aspects of traditionalism, the political nature of transition, the instruments of political modernization, and evolution and revolution in the political process of Middle Eastern states. The course will explore the primary bases of cleavage and conflict and the principal forces that shape the policies and political dynamics of the region.

352 Government and Politics of Western Europe. Semester courses; 3 lecture hours. 3 credits. A comparative study of the political systems of selected Western European countries. Topics to be covered include political culture and socialization, political conflict and recruitment, political participation, policy-making and implementation, and political change.

354 The Soviet Political System. Semester course; 3 lecture hours. 3 credits. A study of the origins, institutions, and processes of the Soviet political system with special emphasis on the post-Stalinist era.

355 Asian Political Systems. Semester course; 3 lecture hours. 3 credits. A comparative analysis of the major South-east Asian governments, with attention to one or more South Asian countries (India, Pakistan, Bangladesh, etc.).

356 Government and Politics of China. Semester course; 3 lecture hours. 3 credits. This course is a study of political and institutional aspects of contemporary China. Special attention will be given to the various aspects of ideology, mass and revolutionary movements, leadership and the decision-making process, party and bureaucracy, the military and foreign relations; particularly American-Chinese relationships.

361 International Relations. Semester course; 3 lecture hours. 3 credits. A survey of world affairs with particular attention to economic resources, political diplomacy, power politics, and other tools of international relations.

362 International Organizations and Institutions. Semester course; 3 lecture hours. 3 credits. The structure and operation of such organizations and regional institutions as the United Nations, the European Economic Community, the Organization for Economic Cooperation and Development, the Organization of American States, the Central American Common Market, the Latin American Free Trade Association, the North Atlantic Treaty Organization, and the Southeast Asia Treaty Organization.

363 American Foreign Policy. Semester course; 3 lecture hours. 3 credits. An analytical survey of processes and practices in the formulation of United States foreign policy, including an introduction to the goals, problems of implementation, and current challenges faced by policymakers.

391 Topics in Political Science. Semester course; 3 lecture hours. 3 credits; maximum total of nine credits in all departmental topics courses may be applied to the major. An intensive survey of a specialized field of political interest. See Schedule of Classes for specific topics to be offered each semester.

409 Continuity and Change in American Politics. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101, 102 or permission of instructor. This course is concerned with the role of cultural, economic, and social variables in shaping American politics and public policy. Particular attention will be devoted to the impact of socioeconomic change upon individual and group behavior, and the structures and processes of American national government.

425 Public Policy in the States. Semester course; 3 lecture hours. 3 credits. The course focuses primarily upon the policy outcomes of state political systems rather than upon institutional processes. Social, economic, political, and governmental structures and their relationship to state policy are analyzed; means of policy evaluation are considered; and the insights developed are applied to substantive areas of state policy.

432 Public Bureaucracy. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 331. An analysis of the nature of bureaucracy and bureaucratic phenomena in American governments; the role and involvement of the bureaucracy in politics and the policy-making process. Primary focus on theories and approaches to understanding the central role of bureaucracy in modern society and its use and abuse of power.

448 Scope and Method of Political Science. Semester course; 3 lecture hours. 3 credits. Prerequisites: POS 101, 102, 201, or permission of instructor. A comprehensive and systematic study of the philosophy of political science, various theories seeking to explain political phenomena, and some of the techniques of political analysis.

452 Seminar in Third World Politics. Semester course; 3 lecture hours. 3 credits. An exploration of the Third World, its origin, its present politics, and its potential as a future power bloc.

454 Seminar in Comparative Communism. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 201 or permission of instructor. A study of the theories, models,

and hypotheses of the Communist party states. This course will also investigate the similarities and the differences of the political process among various Communist party states.

468 Seminar on Comparative Foreign Policy. Semester course; 3 lecture hours. 3 credits. Prerequisite: POS 201 or permission of instructor. A study of theories, models, and hypotheses of foreign policy behavior in various types of political systems with emphasis on empirical research and analysis of differences and similarities.

491 Topics in Political Science. Semester course; 3 lecture hours. 3 credits; maximum total of nine credits in all departmental topics courses may be applied to the major. An intensive survey of a specialized field of political interest. See Schedule of Classes for specific topics to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum four credits per semester; maximum total for all independent study courses six credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in political science. Determination of the amount of credit and permission of the instructor and department chairman must be obtained prior to registration for the course. An independent study course which allows a political science major or other student who meets the requirement to do research, under the direction of an instructor qualified in that area, in a subject or field of major interest.

493/Urban Studies 493 Urban Government Internship. Semester course; 150 clock hours in a local legislative body or administrative agency. 3 credits, may be repeated once for a maximum total of six credits; or 300 clock hours, six credits. Approval of selection committee required. Under supervision of a faculty committee and a field supervisor, the internship is designed to present opportunities for qualified students to acquire exposure to aspects of public decision-making processes by participation in (1) local legislative bodies of the Richmond metropolitan area; (2) local and regional administrative agencies and commissions; and (3) private organizations that have demonstrated interest in local government and politics.

494 Political Science Internship. Semester course; 3 or 6 credits. Cannot be repeated. Designed to provide the student with an opportunity to relate theory to practice through observation and actual experience through internship in the judicial and legislative branches of government.

498 Political Science Honors. Semester course; 3 lecture hours. 3 credits. Prerequisite: admission to the Honors in Political Science Program or permission of the political science honors coordinator. This course will focus primarily on various approaches to the study of politics and will draw together the diverse strands of political science that are the most representative, coherent, and lively in the field. Its purpose is to acquaint the students with various conceptual frameworks for the study of politics or to develop their understanding of the state of the discipline.

499 Political Science Honor Project. Semester course; 3 lecture hours. 3 credits. Prerequisite: successful completion of POS 498 with a "B" grade or above. This course will entail the planning and execution of a major research project demonstrating a thorough understanding and use of research techniques in political analysis, knowledge of relevant literature, sophisticated writing and research ability under the direction of the honors coordinator.

COURSES IN PSYCHOLOGY (PSY)

101 Introduction to Psychology. Semester course; 3 lecture hours. 3 credits. A prerequisite for upper-level work in the field of psychology. A survey of the basic principles, methods of investigation, and fields of study and application.

NOTE: PSY 101 is a prerequisite for the following courses.

214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Frequency distributions, measures of central tendency and variability; sampling, probability, correlation, and significance tests as applied in psychological data.

220 Career Development in Psychology. Semester course; 2 lecture hours. 2 credits. Introduction to the discipline of psychology and the career alternatives available in various specialties. Self-assessment, career decision-making skills, educational program planning methods will be covered. Special topics will include graduate/professional school options, opportunities for minority students, and job search strategies for the B.A. or B.S. psychology major.

NOTE: PSY 220 should be taken before or during the sophomore year.

301 Child Psychology. Semester course; 3 lecture hours. 3 credits. A study is made of the growth and development of the child until puberty. Childlife is viewed in terms of physical, mental, social, emotional, and educational factors.

302 Psychology of Adolescence. Semester course; 3 lecture hours. 3 credits. A study of mental, moral, social, and physical development from puberty to maturity viewed as in child psychology. Designed for secondary school teachers, youth leaders, and professional psychologists.

303 Effective Behavior and Contemporary Psychology. Semester course; 3 lecture hours. 3 credits. Surveys psychological difficulties that often arise in normal human existence, such as depression, self-control difficulties, interpersonal relationship problems, stress, anxiety, and others. Strategies for coping with these problems are covered within a framework of current psychological theories.

304 Developmental Psychology. Semester course; 3 lecture hours. 3 credits. Reviews the basic concepts and principles of physical, cognitive, and social development at each major stage of life—prenatal, infancy, toddlerhood, preschool, middle childhood, adolescence, adulthood, and old age. Consideration is given to the study of development at each stage of life and to different theoretical explanations for development.

305/Education 305 Educational Psychology. Semester course; 3 lecture hours. 3 credits. The application of psychological principles to the teaching-learning process with special emphasis on theories of learning and development.

306 Psychology of Adult Development. Semester course; 3 lecture hours. 3 credits. The life stages and transitions of the *young adult*, middle age, and young-old phases of the life cycle are considered, following a review of methods of research within life-span development psychology. Topics include the impact of events such as birth of the first child, job relocation, mid-life reevaluation, and anticipated retirement.

307 Parapsychology. Semester course; 3 lecture hours. 3 credits. A presentation of recent experimental work in extra-sensory perception, psychokinesis, clairvoyance, precognition, mental telepathy, and other psi phenomena, presented against a background of scientific method. The mind-body problem is a focus of discussion. Classroom experiments are included.

308 Stress and Its Management. Semester course; 3 lecture hours. 3 credits. Physiological and psychological aspects of stressors and the stress response. Review of principles, research, and methods of stress management, such as relaxation, self-suggestions, meditation, and biofeedback.

309 Personality. Semester course; 3 lecture hours. 3 credits. The study of the various approaches to understanding human behavior in terms of personality theory. Various theories will be examined for commonality and uniqueness in assumptions, dynamics, and development of personality.

310 Industrial Psychology. Semester course; 3 lecture hours. 3 credits. Application of psychological principles and techniques to problems in personnel management and human engineering; recruitment, selection, training, and placement in industry; criteria in testing and test development; morale evaluation and improvement, employee counseling; work-management communications; human engineering in equipment design, quality control, working conditions, and safety.

317 Experimental Methods. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: PSY 214. Introduction to experimental procedures and laboratory techniques in psychology. Demonstrations and experiments in sensation, perception, learning, emotion, and motivation.

318 Principles of Psychological Tests and Measurement. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 214. Concepts in psychological measurement and a survey of commonly used tests; testing procedures and rationale underlying these tests; tests of intelligence, aptitude, achievement, interest, and personality critically examined, procedures described for selecting and evaluating specific group tests in these areas.

321 Social Psychology. Semester course; 3 lecture hours. 3 credits. Survey theory and research in social psychology. Topics include interpersonal and social influence processes, attitudes and social cognition, the impact of personality on social behavior, conformity, leadership, and small group behavior.

322/Afro-American Studies 322 Personality and Behavior of the Afro-American. Semester course; 3 lecture hours. 3 credits. A study of personality factors such as motivation, ego-functioning, and the socialization processes, with special emphasis on living conditions of Afro-Americans.

323 Interpersonal Relations. Semester course; 3 lecture hours. 3 credits. Analyzes human relations from various theoretical perspectives. Typical topics include the effects on relationships of attraction, friendship, love, and dependency; the evolution of relationships from initiation through termination. Strategies for increasing effectiveness of communication between individuals are also addressed.

324 Psychology of Advertising. Semester course; 3 lecture hours. 3 credits. Psychological factors involved in determining attention, attitudes, and suggestibility as related to

consumer preferences and purchasing habits; the role of advertising in influencing consumer behavior.

333/Religious Studies 333 Psychology and Religious Experience. Semester course; 3 lecture hours. 3 credits. Religious belief and experience as viewed by major psychological theorists. How psychological methodology has been used to study religious experience. Topics include personality factors and development, conversion experiences, religious experiences and mental health, and human values.

335 Psychology of Women. Semester course; 3 lecture hours. 3 credits. Overview of issues in psychology relevant to women. Topics include: research methods of women's issues; sex-role socialization; women and hormones; psychological androgyny; personality theory and counseling strategies for women; women and language; women and violence; and rape and abuse.

340 Introduction to the Helping Relationship. Semester course; 3 lecture hours. 3 credits. Overview to the dynamics of communication in a helping relationship. Didactic material includes the principles of empathy, nonverbal behavior, problem solving, crisis intervention, and interview techniques. Basic paraprofessional counselor skills will be demonstrated and practiced through structured exercises.

341/Sociology 341 Group Dynamics. Semester course; 3 lecture hours. 3 credits. Social and psychological principles and research related to the individual in groups. Specific topics include motivation for individuals forming and joining groups, performance and productivity of group members, group leadership, and majority and minority influence. The group will be examined in relation to the larger society and as a subculture in itself.

401 Physiological Psychology. Semester course; 3 lecture hours. 3 credits. Data from the fields of anatomy and physiology are presented, and their implications for psychology are discussed. The central nervous system, internal environment, vision, audition, reflexes, emotion, learning behavior disorders, and their physiological components. Behavior of human organism is studied from the psycho-physiological point of view.

403/Linguistics 403 Introduction to Psycholinguistics. Semester course; 3 lecture hours. 3 credits. Method and theory in studying language behavior. Topics include the structure of communication using language, language acquisition, the role of language in thinking and remembering, and the relation of language to other ways of communicating.

405 Humanistic Psychology. Semester course; 3 lecture hours. 3 credits. A critical examination of "third force" psychology emphasizing person-centered and growth-oriented frameworks for the analysis of behaviors believed unique to humans. The course addresses theory and research on the psychological foundations of consciousness, self-awareness, intentionality, symbol manipulation, and related topics which may define human nature as distinct from that of other species.

406 Perception. Semester course; 3 lecture hours. 3 credits. Perception of information from sensory systems with concentration on vision and hearing. Research and theories on how we learn and judge color, form, movement, depth, and how we integrate these in object identification.

407 Psychology of the Abnormal. Semester course; 3 lecture hours. 3 credits. Development of personality is dis-

cussed, with emphasis on factors leading to maladjustment. Lectures and reading cover the symptom groups of emotional disorders of both psychological and organic origin. Methods of assessing and treating these disorders are surveyed.

408 Nonverbal Communication in Human Interaction. Semester course; 3 lecture hours. 3 credits. Theory and research in nonverbal communication including facial expression, body movements, postures, interpersonal space, voice qualities, etc. Importance of nonverbal messages in expressing emotion and in conducting interpersonal transactions, with applications to abnormal behavior and psychotherapy.

410 Principles of Learning and Cognition. Semester course; 3 lecture hours. 3 credits. Comprehensive treatment of learning and cognition with emphasis of humans, from behavioral, cognitive, biological, and developmental viewpoints. Topics include conditioning, information processing, memory, sociobiology, and cognitive and moral development.

415 Animal Behavior. Semester course; 3 lecture hours. 3 credits. Review of methodology and data from ethology and comparative psychology. Explores the effects of learning, motivation, social, and developmental factors on the behavior of organisms ranging from one-celled animals to primates.

426 Child Psychopathology. Semester course; 3 lecture hours. 3 credits. Principal childhood behavioral abnormalities. A review of causes, assessment, and diagnostic methods, and treatment, intervention, and prevention approaches.

427 Psychology of the Handicapped. Semester course; 3 lecture hours. 3 credits. A survey of the handicapped person, with a particular emphasis on the mentally retarded, crippled, cerebral palsied, and hard-of-hearing; extent and nature of the handicap; psychological and emotional aspects; education and treatment and rehabilitation.

430 Engineering Psychology. Semester course; 3 lecture hours. 3 credits. Theory and research related to man-machine-environment systems, their design and effectiveness. Human sensory processes as they relate to information input, human information processing, and human output activities. Application of knowledge in these areas to the design and use of mechanical systems and to man-machine system compatibility.

450 Psychology of the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. An analysis of the mentally retarded with special emphasis on the causes of retardation, psychological evaluation, diagnosis, and classification as well as training, education, and counseling with retardates. Also included are the problems of institutionalization and the training of workers in the field.

451 History and Systems of Psychology. Semester course; 3 lecture hours. 3 credits. The history of psychological ideas and theories emphasizing the origins and interrelationships of the major viewpoints and systems from ancient Greece to the present.

491 Topics in Psychology. Semester course; 3 lecture hours. 3 credits. Maximum total of 6 credits in topics courses. An in-depth study of selected topics and issues in psychology. See Schedule of Classes for specific topics to be offered.

NOTE PSY 492 Independent Study; PSY 493 Field Work: Human Services; PSY 494 Research Internship in Psychology may be repeated for a total of 6 credits but a maximum of 12 credits total for all three courses is allowed.

492 Independent Study. Semester course; variable credit. 1, 2, or 3 credits per semester; maximum total for all independent study courses six credits. Open only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. Independent study is defined as student-conceived and initiated readings or research project which is supervised by a psychology faculty member. An oral examination or written, comprehensive paper is required at the end of the semester.

493 Field Work: Human Services. Semester course; 1 full day per week. 3 credits. Prerequisite: PSY 340. Students are placed in an agency which will provide supervised work experience in various aspects of helping other people. The setting might be a government or private community agency, or a corporation, depending on the student's goals. The student works one full day a week. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

494 Research Internship in Psychology. Semester course; variable credit. 1, 2, or 3 credits per semester. May be repeated, with advisor's approval, for a total of six credits. Permission of faculty research supervisor must be obtained prior to registration. Prerequisites: PSY 214, 317, or permission of supervisor. Students will work on various phases of a research project (design, data collection, data analysis, manuscript writing) under a psychology faculty member's close supervision. This course is designed to enhance the psychology major's career pursuits for either graduate-level training or post-baccalaureate employment.

498-499 Honors in Psychology. Continuous course; 3 lecture hours. 3-3 credits. Prerequisite: consent of undergraduate committee of the Psychology Department. Discussion will include advanced research strategies, related professional issues, and topics determined by the student's interest. Students are required to develop and complete a senior honors thesis which will be the major emphasis of the second semester.

COURSES IN RELIGIOUS STUDIES (RST)

101 Introduction to Religious Studies. Semester course; 3 lecture hours. 3 credits. An introduction to various methodologies for the study of religion and to recurring issues and problems involved in religious life and thought.

211 Christian Ethics. Semester course; 3 lecture hours. 3 credits. An historical and systematic consideration of ethical norms and their application to current problems.

250 Death: Myth and Reality. Semester course; 3 lecture hours. 3 credits. A study of intellectual and emotional responses to death and dying with emphasis upon their role in the development of religious thought and practice. Special attention will be paid to the death theme in literature, to funeral practices, and to beliefs concerning the afterlife in selected world religions.

301 Introduction to the Old Testament. Semester course; 3 lecture hours. 3 credits. A survey of the Old Testament from its beginning through the post-Exile period. Emphasis given to the literary and historical development of the text.

302 Introduction to the New Testament. Semester course; 3 lecture hours. 3 credits. A survey of the New Testament with particular emphasis given to the historical development of the Canon.

303 Intertestamental Literature and Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 301 or 302. The period between the Old and New Testaments as seen through the literature of the era, with emphasis on the writings of the Apocrypha, Pseudepigrapha, and Josephus.

304 Development of Judaic Thought. Semester course; 3 lecture hours. 3 credits. A general survey of the dynamics and characteristic patterns of Judaic thought from earliest times to present.

305 Hebrew Prophets. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 301. A survey of the literature and history of Israel as seen through the work of the writing prophets. Emphasis will be placed on the second part of the Hebrew Canon and the Book of Daniel.

307/Afro-American Studies 307 Black Religion. Semester course; 3 lecture hours. 3 credits. An analysis of the role of religion in the lives of blacks with an emphasis on African religions and philosophies, the black church in America, and the roles of the various faiths, sects, and cults.

308/History 307 The High Middle Ages. Semester course; 3 lecture hours. 3 credits. A detailed historical analysis of the Gregorian Revolution, the Crusades, the twelfth century Renaissance, the Thomistic World, and the death of medieval civilization.

309/History 309 The Reformation. Semester course; 3 lecture hours. 3 credits. A careful and intensive inquiry into the spiritual and material forces and people involved in the reformation of Christendom in sixteenth century Europe.

311, 312 Religions of the World. Semester course; 3 lecture hours. 3, 3 credits. An investigation of the historical, cultural, and theological foundations and development of major world religions. First semester: Hinduism, Buddhism, Confucianism, Taoism, and Shinto. Second semester: Zoroastrianism, Judaism, Christianity, and Islam.

313 Life and Literature of Paul. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 302. A survey of the life and literature of Paul as given in Acts and the Epistles, involving special consideration of Paul's contribution to the expansion of Christianity.

314 Jesus in the New Testament Tradition. Semester course; 3 lecture hours. 3 credits. A study of the Christ of faith and the Jesus of history as presented in the New Testament literature and as interpreted in the works of selected scholars from the Church fathers to the present.

315, 316/History 301, 302 The Ancient Near East. Semester course; 3 lecture hours. 3, 3 credits. A study of the ancient Near Eastern civilizations of Mesopotamia, Egypt, Anatolia, and Syria-Palestine, from the pre-literary period to that of the Archaemenid Empire of the Persians. First semester: pre-literary period to the end of Kassite rule in Babylonia (c.-1160 B.C.). Second semester: the rise and fall of the

great Neo-Assyrian, Neo-Babylonian, Hebrew, and Persian Empires (c.-311 B.C.).

317 Islam. Semester course; 3 lecture hours. 3 credits. A study of the antecedents, historical advent, and contemporary structure of the Islamic religion.

321 Dead Sea Scrolls. Semester course; 3 lecture hours. 3 credits. Prerequisite: RST 301. A survey of the major manuscript discoveries from Qumran near the Dead Sea, some of the theories concerning them, and an examination of their significance for biblical scholarship.

326/Philosophy 326 Existentialism. Semester course; 3 lecture hours. 3 credits. Prerequisites: 3 credits in philosophy (exclusive of logic) or permission of instructor. An examination of the nature of truth, freedom, responsibility, individuality, and interpersonal relations as found in some principal writings of Kierkegaard, Nietzsche, Jaspers, Sartre, Heidegger, Camus, Buber, Marcel.

327/History 327 History of Christianity. Semester course; 3 lecture hours. 3 credits. An historical and theological examination of Christianity from its origin to the present. Emphasis will be upon an understanding of leading events, ideas, movements, and persons in their historical settings.

331 Christianity and Culture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 credits of religious studies. A study of the interaction of Christianity and Western culture.

333/Psychology 333 Psychology and Religious Experience. Semester course; 3 lecture hours. 3 credits. Religious belief and experience as viewed by major psychological theorists. How psychological methodology has been used to study religious experience. Topics include personality factors and development, conversion experiences, religious experiences and mental health, and human values.

334 Religion in Contemporary America. Semester course; 3 lecture hours. 3 credits. Religious phenomena in American life and thought ranging from denominationalism to the Jesus Movement.

360/Sociology 360 Sociology of Religion. Semester course; 3 lecture hours. 3 credits. A systematic review and assessment of major sociological theories of and empirical research on religious behavior and groups. Topics include the structure of religious organizations; social correlates and functions of religion; denominationalism; religion and social class, social change and population.

361/English 361 The Bible as Literature. Semester course; 3 lecture hours. 3 credits. Literary aspects of the Bible will be considered. Also attention will be given to the history of the English Bible.

403/History 403 History of Western Religion. Semester course; 3 lecture hours. 3 credits. A study of the development of religious thought and action in Western culture, including the Medieval, Reformation, Counter-Reformation, and Modern periods.

405 Contemporary Problems in Christian Thinking. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Problems to be treated include the Christian understanding of history, the current ecumenical movement within the church, reinterpretation of traditional doctrines, and changes in ethical thinking and social involvement.

407 Modern Jewish Thought. Semester course; 3 lecture hours. 3 credits. A study of the writings of the leading Jewish thinkers of the nineteenth and twentieth centuries. Special reference will be made to the issues arising from the encounter of Judaism with the modern world: the nature of revelation and the authority of the Torah, the nature of God, the impact of the Holocaust, the meaning of redemption, and the significance of the state of Israel.

408/Philosophy 408 Indian Tradition. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHI 104 or RST 311. A systematic analysis of the major theories of Indian religious and philosophical thought: Vedas, Upanishads, Gita, Charvaka, Jainism, Buddhism, the six systems of Hinduism, and contemporary developments.

410/Philosophy 410 The Chinese Tradition in Philosophy. Semester course; 3 lecture hours. 3 credits. A study of the development of Confucianism, of alternative ways of thought prior to the fall of the Han Dynasty, and of neo-Confucianism. The systems of thought are examined in the light of their social, political, and religious impact on China, Korea, and Japan.

412/Philosophy 412 Zen Buddhism. Semester course; 3 lecture hours. 3 credits. A study of Zen Buddhism, including backgrounds in Indian philosophy and practice, development in China and Korea, and present day Zen theory and practice in Japan and in Western countries.

430/Philosophy 430 Philosophy of Religion. Semester course; 3 lecture hours. 3 credits. Prerequisites: 3 credits in philosophy (exclusive of PHI 211 and PHI 212) or permission of instructor. An introduction to the major problems and questions of religion and reason. Special reference will be made to the nature of God, the nature of man, the problem of evil, the source of good, immortality, and the basis of authority.

440/Philosophy 440 Mysticism. Semester course; 3 lecture hours. 3 credits. Prerequisite: one course in philosophy or religious studies. A critical analysis of the varieties of mysticism in world religions. Arguments for and against mysticism will be emphasized. Mysticism will be related to art, psychology, science, philosophy, theology, and magic.

490 Seminar in Religious Studies. Semester course; 3 lecture hours. 3 credits. Maximum six credits. Prerequisite: 12 hours in RST courses. Research methods and bibliography in the field of religious studies; application of techniques and resources on research topics with classroom guidance and critique.

491 Topics in Religious Studies. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for maximum of six credits. Prerequisite: written permission of instructor. An in-depth study of selected ideas or concepts, religious thinkers, or significant movements in the field of religion. See Schedule of Classes for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum four credits per semester; maximum total for all independent study courses six credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of instructor and department chairman must be procured prior to registration for the course. An independent study course to allow interested students in religious studies to do research in an area of

major interest under the direction of a professor qualified in that field.

COURSES IN RUSSIAN (RUS)

101-102 Elementary Russian. Continuous course; 5 lecture/recitation hours. 4-4 credits. Elementary grammar, reading, and oral drill.

201-202 Intermediate Russian. Continuous course; 3 lecture hours; 3-3 credits. Rapid review of the essentials of grammar; conversation, readings in Russian literature.

205 Intermediate Russian Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: RUS 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

COURSES IN SOCIAL SCIENCES (SSC)

205 Course by Newspaper. Semester course; 3 credits. Maximum total six credits. This course cannot count for credit towards a major nor as a prerequisite for other courses. A maximum of nine credits may be taken in courses by newspaper (HUM 205/SSC 205). A discussion of subjects of interest to students and the general public based on syndicated newspaper articles by distinguished scholars from a variety of perspectives. Students enrolled for credit will attend six sessions, four for lecture and discussion and two primarily for testing. Midterm and final exam will be based on the newspaper series, course reader, study guide, and any other materials which the instructor may assign. Two assigned papers related to topics of the course will be required.

206 Course by Broadcasting. Semester course; 3 credits. Maximum total six credits. This course cannot count toward credit for a major or meet any prerequisites for other courses but may be used for elective credit. A discussion of subjects of interest to students and the general public in conjunction with presentations on television or radio. Students enrolled for credit will attend a minimum of four meetings for lecture and discussion and two meetings primarily for testing. Midterm and final examinations will be based on the broadcast series, course reader, study guide, and other materials which the instructor may assign. Two assigned papers related to topics in the course will be required.

291 Issues in Social Science. Semester course; variable credits, 1-3 credits per semester, maximum total six credits. An interdisciplinary course structured around social issues pertinent to today's society. See Schedule of Classes for particular issue to be covered and the semester credit for which each course will be offered.

301 The Ascent of Man. Semester course; 3 credits. A course through television. The series traces the development of science as an expression of man.

303 Marriage and Family Relationships. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. Marriage and the family in contemporary society. Topics discussed will include the effects of masculine and feminine roles on marital and parent-child relationships, how role problems are resolved, sexual adjustments, financial adjustment, family planning, and retirement.

330 The Psychology and Sociology of Death. Semester

course; 3 lecture hours. 3 credits. Prerequisite: PSY 101 or SOC 101. An interdisciplinary study of the encounter with death, death and personality, the organizational processing of death, and demographic regularities of dying. The course is jointly taught by sociologists and psychologists.

340 Human Sexuality. Semester course; 3 lecture hours. 3 credits. A study of the variety of the forms, sources, and consequences of human sexual behaviors and the attitudes, beliefs, and values associated with them. The data and its analysis are directed to the significance of sex in human experience.

350 The Construction of Culture. Semester course; 3 lecture hours. 3 credits. An examination, using methods from several disciplines, of the ways in which human beings construct the shared meanings which constitute culture.

351 The Imposition of Domination. Semester course; 3 lecture hours. 3 credits. An examination of the relationship between culture and power. The focus will be upon a critical analysis of contemporary American life.

380 Divorce and After. Semester course; 3 lecture hours. 3 credits. A study of the social, legal, and personal aspects of divorce. Emphasis will be on the social consequences of divorce and its impact on husbands, wives, and children and their adjustment to it.

COURSES IN SOCIOLOGY (SOC)

101 General Sociology. Semester course; 3 lecture hours. 3 credits. An introduction to the study of human society. The basic concepts of society and culture and their relationships to each other are studied and then used to analyze the major social institutions.

102 Contemporary Social Problems. Semester course; 3 lecture hours. 3 credits. A sociological approach to selected contemporary social problems through use of such analytical concepts as role, social class, and subculture.

105/Afro-American Studies 105 Sociology of Racism. Semester course; 3 lecture hours. 3 credits. The course will explore the direct and indirect ways in which racial attitudes are acquired, their effect on the individuals and society, and the institutional and ideological manifestations of racism as a "faith system," as exploitation, and as a form of human conflict. The central focus of interest will be on black-white relationships.

200 The Community. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A comparative analysis of communities from different parts of the world.

203 Sociology of Deviant Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An analysis of the relationship between social structure, social control, and patterns of social deviance; a survey and critique of present social science theories in light of empirical research and application of the theories to selected problem areas.

210 Crowds, Riots, and Social Movements. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An analysis of non-institutional forms of behavior, including mobs, riots, and social movements.

214/Political Science 214 Applications of Statistics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. The application of descriptive and inferential statistics for the social sciences.

304/Sociology 304 The Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. The family in its social and cultural context. Analysis of child rearing, marriage, kinship, family crises, and family change in various societies around the world.

305/Afro-American Studies 305 Sociology of the Black Family. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A socio-history of the development of the dynamics of the black family.

315 Education and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of education as a social institution in the societal context. Cross-cultural comparative perspectives on education.

318 Social Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A review of the ideas of major social philosophers whose works are now the foundation of much modern sociology.

320/Political Science 320 Research Methods in the Social Sciences. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: STA 213. Current methods of research in sociology.

321 Class, Status, and Power. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of social mobility, class, status, and power.

322 Minority Groups in the United States. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A study of the various racial, religious, and ethnic minority groups. Accommodation and assimilation. Relation of subcultures to the dominant culture.

327 Urban Sociology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Origin, character, and significance of urban communities. Ecological and social factors are analyzed as well as changes in urban social organization and their consequences.

331 Juvenile Delinquency. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of the biological, cultural, psychological, and social factors involved in juvenile delinquency and their relation to current techniques of treatment, prevention, and control.

333 Sex Roles. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or permission of instructor. A cross-cultural and evolutionary exploration of the interdependence between male and female roles in the following social institutions: family, law, economics, politics, religion, education, and health.

340 Social Psychology. Semester course; 3 lecture hours. 3 credits. Focused discussion of the regularities in human behavior that arise due to man's participation in social groups. Emphasis will be placed on such topics as communications, attitudes, language; interpersonal perception, personal identities, and social interaction.

341/Psychology 341 Group Dynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: PSY 101. Social and psychological principles and research related to the individual in groups. Specific topics include motivation for individuals forming and joining groups, performance and productivity of group members, group leadership, and majority and minority influence. The group will be examined in relation to the larger society and as a subculture in itself.

350 Sociology of Leisure. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Study of the sociological determinants, contexts, and consequences of leisure in modern societies. Emphasis will be placed on such topics as work and leisure, social class and leisure, social change and leisure, popular culture, and sociology of sport.

355 Natural Resources and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An examination of social factors and issues related to the distribution, use, and production of resources vital to human societies. The focus will be on food, land, water, and energy. Implications of alternative choices regarding environmental quality, food processing, growth, and conservation will be reviewed and evaluated.

360/Religious Studies 360 Sociology of Religion. Semester course; 3 lecture hours. 3 credits. A systematic review and assessment of major sociological theories of and empirical research on religious behavior and groups. Topics include the structure of religious organizations; social correlates and functions of religion; denominationalism; religion and social class, social change and population.

370 Mass Media and Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101, MAC 101, or POS 102. An analysis of the major types of mass media communication as socializing agents and instruments of social change. The significance of the mass media for cultural patterns and social values will be explored, and the structure and functions of the media in different societies will be compared.

380/Anthropology 380 Drugs, Society, and Culture. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101 or ANT 103. An examination of the anthropological and sociological significance of drugs and drug use from pre-historic cultures through modern societies.

391 Topics in Sociology. Semester course; 3 lecture hours. 3 credits, maximum six credits per semester; maximum total of 18 credits in all departmental topics courses which may be applied to the major. A discussion of specialized areas of sociological interest. See Schedule of Classes for specific topics to be offered each semester. Check with department for specific prerequisites.

402 Sociological Theory. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A study of the works of the major sociological theorists of the twentieth century.

403 Criminology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Analysis of the nature, extent, and distribution of crime emphasizing theories of and research on causation, prediction, and prevention.

421 Applied Social Research. Semester course; variable credit; may be repeated for a total of six credits. Prerequisites: SOC 214 and 320. A laboratory course providing training in the application of social research methods under laboratory and field situations to problems of mutual interest to community policymakers and professionals in the disciplines of sociology, social psychology, and anthropology. This course is designed to enhance the skills of students in applied social research. With direct supervision by the instructor, individuals or small groups of students will address themselves to the tasks of defining, designing, and executing research projects.

426 Population Dynamics. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. The study of trends

in fertility, mortality, population growth, distribution, migration, and composition. The mutual influences of these factors and social organization.

430 Politics, Power, and Ideology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. Sociological analysis of political organization and behavior. Such subjects as distribution and uses of power, creation and management of group conflict, development and diffusion of political ideologies, and problems of bureaucracy and mass society will be considered.

436 Work and Management in Modern Society. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. The study of industrial plants and business organizations as social systems.

445 Medical Sociology. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of the social, economic, cultural, and social psychological factors in health and illness; the sociology of health and medical care organizations and settings; the sociology of health occupations; and the techniques of research in medical sociology.

446 Sociology of Mental Illness. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of selected social, economic, cultural, and social psychological factors in mental health and illness. Such problems as defining mental illness; social factors in the distribution, diagnosis, etiology, and treatment of mental disorders; mental illness as a social role; and research methods used in the sociology of mental illness will be considered.

475 Organizations and Human Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. A survey of theory and research in social organizations, including the study of behavior in modern complex human organizations.

476 Labor, Occupations, and Careers. Semester course; 3 lecture hours. 3 credits. Prerequisite: SOC 101. An examination of labor force participation in terms of the individual worker's experience, the work setting, the nature of occupations, and labor force composition.

492 Independent Study. Semester course; variable credit, maximum six credits per semester; maximum total for all independent study courses 12 credits. Open generally only to students of junior or senior standing who have acquired at least 12 credits in the departmental discipline. Determination of the amount of credit and permission of the instructor and department chairman must be procured prior to registration for the course. Cannot be used in place of existing courses.

493 Field Research Internship. Semester course; 3 credits, maximum six credits. Prerequisite: for sociology and anthropology majors of junior or senior standing. Applications must be approved by a faculty advisor and by the internship coordinator. Students are placed in organizations that offer supervised work or research experience appropriate to their interests. Each student must work 150 clock hours in the organization and write a sociological analysis of experiences using appropriate field work methodological techniques.

501 The Foundations of Sociological Theory. Semester course; 3 lecture hours. 3 credits. The foundations of theoretical explanation of the social world are addressed from an historical and philosophical perspective. The emergence of contemporary sociological theory in the nineteenth and twentieth centuries is reviewed.

502 Contemporary Sociological Theory. Semester course; 3 lecture hours. 3 credits. A critical assessment is given of such contemporary theoretical orientations as functionalism, conflict theory, exchange theory, symbolic interactionism, and phenomenology.

COURSES IN SPANISH (SPA)

101–102 Elementary Spanish. Continuous course; 5 lecture/recitation hours. 4–4 credits. Elementary grammar, reading, and oral drills.

201 Intermediate Spanish. Semester course; 3 lecture hours. 3 credits. Intensive review of the essentials of grammar, with continued emphasis on oral, reading, and writing skills.

NOTE: In order to complete Spanish through the intermediate level, a student may select SPA 202 or 205.

202 Intermediate Spanish Readings. Semester course; 3 lecture hours. 3 credits. Prerequisite: SPA 201 or the equivalent. Designed to increase the student's reading ability through the study of selected cultural and literary texts.

205 Intermediate Spanish Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: SPA 201 or the equivalent. Designed to increase the student's proficiency in the spoken language through audio-oral exercises, dialogues, and free conversation.

301, 302 Survey of Literature. Semester course; 3 lecture hours. 3, 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. A survey of Spanish literature up to the present.

303, 304 Advanced Grammar and Writing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A systematic review of Spanish grammar with emphasis on the elements of style and vocabulary building; translation and composition.

305 Spanish Conversation. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. Practice in the spoken language with emphasis on discussions relating to topics of current interest.

306 The Civilization of Spain. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Conducted in Spanish. A treatment of salient manifestations of Spanish culture and civilization from its origins to the present.

307 Latin American Civilization. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. Spanish 306 recommended. Conducted in Spanish. A treatment of the main manifestations of Latin American culture and civilization from Pre-Colombian times to the present. Particular emphasis on twentieth-century developments.

311 Spanish through the Media. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A course designed to develop language proficiency by using material available through the various media: newspapers, magazines, films, slides, and radio broadcasts.

314 Commercial Spanish. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. The course will develop the student's ability to use the Spanish language as a means of oral and written communication in the business world.

316/Linguistics 316 Spanish Linguistics. Semester course; 3 lecture hours. 3 credits. Prerequisite: Spanish through the intermediate level or the equivalent. A study of Spanish phonetics with oral practice in pronunciation; an introduction to the history of the Spanish language, and a review of linguistic problems encountered in the teaching of Spanish.

321, 322 Survey of the Literature of Spanish America. Semester courses; 3 lecture hours. 3, 3 credits. Conducted in Spanish. Prerequisite: Spanish through the intermediate level or the equivalent. An introduction to major authors and trends. First semester: from discovery to independence. Second semester: from the independence to the present.

NOTE: SPA 301, 302 or 303, 304 are prerequisite to all of the following courses.

411 The Middle Ages. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and discussion of such representative works as the following: *El Poema de Mio Cid* (anonymous); selections from the lyric poetry; selections from the works of Gonzalo de Berceo; *El Auto de los Reyes Magos*; *El Libro del Conde Lucanor*, Don Juan Manuel; *El Libro de Buen Armor*, Arcipreste de Hita.

412 The Golden Age: Renaissance. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and discussion of such representative works as *Lazarillo de Tormes*, *Amadis de Gaula*, the *Romancero* (anonymous) and such authors as Antonio de Guevara, Juan de la Cueva, Luis de Leon, Garcilaso de la Vega, and Fernando de Rojas.

413 The Golden Age: Baroque. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. A reading and discussion of representative works of Cervantes, Lope de Vega, Tirso de Molina, Calderon, Gongora, and Quevedo.

417 Nineteenth-Century Literature. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. A reading and discussion of representative works of Valera, Fernan Caballero, Pereda, Galdos, Clarin, Larra, Espronceda, Duque de Rivas, and Pardo Bazan.

420 The Twentieth Century. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. Reading and dis-

cussion of representative works of Ganimet, Azorin, Unamuno, Baroja, Valle-Inclan, Perez de Ayala, Garcia Lorca, Sotela, Ortega, Gironella, Cela, Goytisolo, Laforet, and Matute.

425 Spanish-American Literature: Prose Fiction. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. An in-depth reading and discussion of novels and short stories.

426 Spanish-American Literature: Poetry, Drama, Essay. Semester course; 3 lecture hours. 3 credits. Conducted in Spanish. An in-depth reading and discussion of outstanding works of each of these three genres.

491 Topics in Spanish. Semester course; 3 lecture hours. 3 credits. May be repeated with different topics for a maximum total of six credits. An in-depth study of selected topics in Spanish. See Schedule of Classes for specific topic to be offered each semester.

492 Independent Study. Semester course; variable credit, maximum 3 credits per semester; maximum total for all independent study courses in Spanish six credits. Open generally only to students of junior or senior standing who have six credits of upper-level Spanish courses and/or have demonstrated a competency in the language. Determination of course content and permission of instructor and department chairman must be obtained prior to registration for the course. A course designed to give students an opportunity to become involved in independent study in a literary or linguistic area or subject in which they have an interest.

COURSES IN STATISTICS (STA)

Statistics is one of the mathematical sciences. See mathematical sciences for course descriptions.

COURSES IN UNIVERSITY STUDIES (UNS)

291 Interdisciplinary Topics: Semester course; variable credits; 1-4 credits per semester, maximum total in all university studies courses 8 credits. An interdisciplinary course designed to give the student an overview of a topic not associated with a particular discipline.



Students in the School of Allied Health Professions are enrolled in programs of study ranging from associate degrees to doctorate graduate certificates.

PART VII—School of Allied Health Professions

THOMAS C. BARKER

Dean

LARRIE J. DEAN

Assistant Dean

JENNIE D. SEATON

Assistant Dean

JAMES L. DUNN

Director, External Affairs

The School of Allied Health Professions was established within the Medical College of Virginia of Virginia Commonwealth University on January 1, 1969.

A fundamental reason for the establishment of the School of Allied Health Professions was to provide an administrative structure for existing educational programs in allied health disciplines and to direct the development of new programs in response to the growing need for allied health manpower. At the outset, the school incorporated existing educational programs for hospital administration, medical technology, physical therapy, radiologic technology, and X-ray technicians. A program for nurse anesthesia was inaugurated as a separate department in 1969; an existing educational program in occupational therapy located on the Academic Campus was transferred administratively to the School of Allied Health Professions in 1970; and, also in 1970, a teaching program in patient counseling formerly based within MCV Hospitals was integrated with the school. A Bachelor of Science degree with a major in health-care management was introduced in 1973 as a cooperative venture

with the School of Business. The latest offerings are a Bachelor of Science degree program in medical record administration which began in the fall of 1978, a Bachelor of Science program in clinical radiation sciences, and the Master of Science program in nurse anesthesia, both of which were offered for the first time in 1979. In January 1985, the existing Department of Gerontology was transferred administratively to the School of Allied Health Professions.

BACCALAUREATE DEGREE PROGRAMS

Baccalaureate degree programs offered through the School of Allied Health Professions are

- Health Care Management
- Medical Record Administration
- Medical Technology
- Occupational Therapy
- Physical Therapy
- Radiologic Technology (Associate degree)
- Clinical Radiation Sciences

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the School of Allied Health Professions, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

ACCREDITATION

Virginia Commonwealth University and its component schools are accredited by the South-

ern Association of Colleges and Schools, the general accrediting agency for colleges in the region. The School of Allied Health Professions is an institutional member of the American Society of Allied Health Professions, and the Virginia Association of Allied Health professions. All its programs are approved or accredited by the appropriate national professional or educational organizations.

PROGRAM IN LONG-TERM AND HEALTH CARE MANAGEMENT

The program in long-term and health care management was established in 1973. Today, two areas of concentration are available: long-term care administration and health care management.

The purpose of the concentration in long-term care administration is to meet management needs in long-term care facilities and organizations. Health care management is a more general field of study and prepares students for careers in hospital and clinic management appropriate to the baccalaureate level of education.

The B.S. degree in health care management with either concentration is a two-year, upper-division curriculum offered by the Department of Health Administration, School of Allied Health Professions, in cooperation with the School of Business. Applicants are accepted into this program after completing a minimum of 60 semester hours of undergraduate work and meeting established prerequisites and qualifications.

It is anticipated that most candidates for the B.S. degree in health care management will be full-time students. However, part-time students will be accepted. The part-time degree program is intended primarily for persons who are already employed in the health industry. The admissions standards and degree requirements for part-time degree candidates are the same as those for full-time degree candidates.

ACADEMIC ADMISSION REQUIREMENTS

1. The applicant must have attained a junior standing or have completed a minimum of 60 credits from schools within Virginia Commonwealth University and/or from other accredited colleges and universities including community colleges. (If a student possesses a diploma awarded by a two- or three-year nurse training program, is currently licensed as a registered nurse, and has at least three

years experience in a responsible administrative position in a health care organization immediately prior to application, the program may award up to 45 credits toward the B.S. degree.)

2. A significant portion of the minimum of 60 credits to have been completed prior to admission into the program should be made up of general foundation courses. The foundation course credits should be distributed as follows:

Courses	Credits
English	6
Psychology	3
History	3
Government	3
Humanities	6
Mathematics	3
Science	6
Total	30

Should an applicant lack some of the foundation courses prior to entering the program, these courses must be taken during the junior year.

3. Applicant must have a minimum 2.0 grade-point average on a 4.0 scale.
4. The applicant must have completed at least three credits in accounting and three credits in economics.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Health Administration, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

JUNIOR AND SENIOR YEAR CURRICULUM

For the baccalaureate degree, students from both concentrations must satisfactorily complete 39 hours of required courses within a core curriculum offered by the Department of Health Administration and the School of Business. In addition to the core curriculum, students in each concentration must complete 12 hours of specialized courses.

Core Courses (39 credits)

BUS/MAT

- 112 Elements of Calculus for the Behavioral, Social, and Management Sciences (BUS/MAT 111 or appropriate standing on the placement exam prerequisite)
- BUS 204 Introduction to Accounting II (BUS 203 prerequisite)
- BUS 260 Information Systems Concepts
- BUS 301 Business Statistics (BUS/MAT 112 prerequisite)
- BUS 311 Financial Management (BUS 204 prerequisite)
- BUS 323 Legal Environment of Business
- HCM 300 Health Care Organization and Services
- HCM 301 Aspects of Illness and Disability
- HCM 308 Fundamentals of Management in Health Care Facilities
- HCM 404 Financial Management in Health Care Facilities (BUS 311 and HCM 300 prerequisites)
- HCM 405 Health Law (BUS 323 and HCM 300 prerequisites)
- HCM 406 Personnel Management in Health Care Facilities (HCM 308 or BUS 321 prerequisite)
- HCM 407 Health Planning and Political Process (HCM 300 and BUS 301 prerequisites)

Courses for Concentration in Long-term Care Administration (12 credits)

- HCM 302 Structure and Functions of Long-term Care Organizations
- HCM 409 Management in Long-term Care Facilities (BUS 321 prerequisite)
- HCM 493 Practicum in Long-term Care (HCM 302 prerequisite)
- GTY 410 Introduction to Gerontology

HCM 493 Practicum in Long-term Care Administration is an integral part of the course work in the Concentration in Long-term Care Administration. The basic purpose of fieldwork is to provide the student with the opportunity to apply and develop administrative knowledge and skill through a period of applied educational experience. The fieldwork is directly supervised by faculty members of the Department of Health Administration and administrators designated as preceptors within institutions or agencies. This experiential component of the program usually falls in the summer between the junior and senior years and consists of 480 hours of work on the site.

Courses for Concentration in Health Care Management (12 credits)

- HCM 408 Management in Health Care Facilities (BUS 321, prerequisite)
- HCM 410 Seminar in Health Care Management

Students must elect two of the following courses as part of the concentration:

- HCM 302 Structure and Functions of Long-term Care Organizations
- BUS 308 Introduction to Marketing (ECO 201 prerequisite)

- HCM 309 Health Economics (ECO 202 or 203 prerequisite)
- BUS 324 Legal Aspects of the Management Process (BUS 323 prerequisite)
- BUS 325 Business Communications
- ENG/BUS 327 Business and Technical Report Writing
- BUS 333 Risk and Insurance
- BUS 379 Logistics and Physical Distribution
- BUS 417 Cases in Financial Management (BUS 311 prerequisite)
- BUS 420 Seminar in Industrial Relations (permission of instructor required)
- BUS 426 Life and Health Insurance
- BUS 427 Labor Law and Legislation (BUS 323 prerequisite)
- BUS 430 Social Insurance
- BUS 433 Compensation Management
- BUS 435 Seminar in Personnel Management (permission of instructor required)
- AJP 330 Safety Codes, Standards and Regulations
- MAC 323 Public Relations (MAC 203 prerequisite)
- POS 331 Public Administration
- SOC 445 Medical sociology (SOC 101 prerequisite)
- SOC 446 Sociology of Mental Illness (SOC 101 prerequisite)

The remainder of the 126 hours required for the Bachelor of Science degree is satisfied by taking elective courses selected on an individual basis by the student with the assistance of a faculty advisor. Fifteen credit hours of electives are available provided that 60 credits have been accumulated prior to entrance to the program.

PROGRAM IN MEDICAL RECORD ADMINISTRATION

The Program in Medical Record Administration was opened in 1978 and is the first baccalaureate program in the field of medical record science in Virginia. The first students were admitted in the fall of 1978, and the first degrees (Bachelor of Science in medical record administration) were awarded in May 1980.

The program started as a cooperative venture of the McGuire Veterans Administration Medical Center, the MCV/VCU School of Allied Health Professions, and the School of Business of Virginia Commonwealth University.

The program was organized to assist in meeting an urgent need for health record professionals in Virginia and the region.

A critical national need and technological advances have made health care a rapidly expanding field with many career opportunities. Hardly anywhere is this need felt more than in medical record administration, which is defined by the American Medical Association as "the management of health information systems con-

sistent with the medical, administrative, ethical, and legal requirements of the health care delivery system." The improvement and refinement of health record and information systems are required to promote quality medical care and evaluation, and to provide quality data and coding for equitable reimbursement by Medicare, third party health insurance, and research.

The medical record administrator is usually administrative head of the medical record department of a health facility. The administrator plans, coordinates, and administers the patient health information system. This person is charged with these responsibilities:

1. Maintaining complete and accurate records on patients treated.
2. Developing, analyzing, and technically evaluating health records.
3. Developing secondary records such as indices of physicians, diseases treated, and operations performed.
4. Developing and analyzing statistical reports.
5. Supervising departmental workers.
6. Assisting the medical staff in developing methods of evaluating patient care.
7. Assisting hospital personnel in conducting research projects that require abstracting and displaying health data from the medical record.
8. Managing the medical record department and its systems.

ACCREDITATION

The program is accredited by the Committee on Allied Health Education and Accreditation, American Medical Association, in collaboration with the American Medical Record Association.

Upon satisfactory completion of the program the student is awarded a Bachelor of Science degree in medical record administration by Virginia Commonwealth University and becomes eligible to take the examination for registration by the American Medical Record Association.

ACADEMIC ADMISSION REQUIREMENTS

Students are admitted to the program as juniors and must have completed 60 hours at an accredited college or university. This minimum requirement is to include

	Credits
Humanities	
English	6
(Composition and Literature)	
Speech	2
Biological Sciences	12
Including a minimum of 5 semester hours of Human Anatomy and Physiology with laboratory	
Arts and Sciences	
College Mathematics or Algebra	3
Economics	2
Psychology	2
Sociology	2
Statistics	3
Electives	28
Total	60

Typing proficiency must also be demonstrated prior to admission to the program.

For information about additional requirements for admission, the specific procedures for application for admission, and requirements for promotion and graduation, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM

Students in the medical record administration program must satisfactorily complete the following courses:

Junior Year, Fall Semester	Credits
MER 300 Medical Terminology	3
MER 300L Medical Terminology and Transcription Laboratory	1
MER 301 Introduction to Records Management	2
MER 313 Medical Record Science and Administration I	3
BUS 260 Information Systems Concepts	3
PMC 371 Pathophysiology and Pharmacology I	4
MER 393 Clinical Practicum I	1
	17
Junior Year, Spring Semester	
MER 400L Medical Record Science and Administration II	3
MER 433 Quality Assurance and Medical Care Evaluation	3
PMC 372 Pathophysiology and Pharmacology II	3
BUS 321 Organization and Management I	3
BUS 323 Legal Environment of Business	3
Elective	3
	18

Senior Year, Summer Session

MER 493	Clinical Practicum II	2.5
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Senior Year, Fall Semester

MER 422L	Medical Record Science and Administration II	4
HCM 300	Health Care Organization and Services	3
HCM 406	Personnel Management in Health Care Facilities	3
HCM 309	Health Economics	3
	Elective	3
		16

Senior Year, Spring Semester

AHP 330	Special Topics: Computer Applications in Health Care	3
MER 423	Medical Record Science and Administration III	5
MER 491	Special Topics in Medical Record Administration	3
MER 494	Clinical Practicum III	2.5
HCM 399V	Independent Study	2
		15.5

Total 69

PROGRAM IN MEDICAL TECHNOLOGY

Medical technologists have been trained at MCV since 1932. However, the Department (formerly school) of Medical Technology was not formally established until 1952. The school offered a certificate and/or degree program, meeting the requirements of the American Medical Association as implemented through the Board of Schools of the American Society of Clinical Pathologists (ASCP). In 1961-62 the certificate program was discontinued, and all students accepted must have previously completed 90 credits, which included medical technology prerequisites. Upon completion of the course, the students were awarded a Bachelor of Science in medical technology degree.

In 1952 the program was established as six months of didactic experience with lectures and laboratory sessions held in the department, followed by a six-month rotation through the clinical laboratories. From 1952-1967, two classes were admitted each year, but the practice was discontinued with the graduation of the class of 1967. From 1968-74 only one class was admitted each year.

Beginning with the 1974 fall term the program changed to a 2+2 format. Prior to entrance, students must have completed 60 credits including medical technology prerequisites. Upon completion of the prescribed curriculum, the

student is awarded a Bachelor of Science in medical technology degree. In 1967 a graduate program was begun leading to a Master of Science degree in medical technology.

The department offers a baccalaureate program consisting of two semesters of didactic education, followed by a six-week summer session in a hospital laboratory somewhere in Virginia. During the senior year, students spend 23 weeks in the clinical laboratories. In addition to the clinical laboratory experience, the senior year includes advanced courses in each medical science discipline: one course in basic education and supervision, one course in computer applications in the clinical laboratory, and one course in clinical correlations of laboratory data with disease states. Certified medical technicians may complete the program sooner by transfer of credits and/or successfully completing challenge exams for certain courses.

ACCREDITATION

The Department of Medical Technology is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association. A Bachelor of Science degree in medical technology is granted by Virginia Commonwealth University upon satisfactory completion of the prescribed curriculum. Upon completion of the program, the student is eligible for the national examination given by the Board of Registry of the American Society of Clinical Pathologists and the National Certification Agency for Medical Laboratory Personnel (NCAMLP). This is not an affiliate program.

ACADEMIC ADMISSION REQUIREMENTS

To qualify for admission, a candidate must have completed a minimum of 60 credit hours of collegiate training in any college or university approved by a recognized regional accrediting agency. Accredited collegiate training in preparation for the study of medical technology, as for any professional career, should provide the opportunity for broad general education to include English, the social sciences, the arts, and the humanities. On entry to the department, the student must have completed 12 hours of chemistry (eight hours of general required; the remaining four hours preferred in the following order: quantitative, organic, or qualitative; other courses may be accepted); 12 hours of biology

(preferred—four hours of general, four hours of human physiology, and four hours of human anatomy); three hours of mathematics; and six hours of English.

Special Admissions. Certified medical technicians (or those eligible for certification) may be admitted with less than 60 semester hours. Transfer credits are accepted for some courses. Challenge examinations are offered.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM

Junior Year		Credits
MET 300	Basic Concepts	2
MET 301-302	Hematology	7
MET 303	Parasitology	3
MET 304	Clinical Microscopy and Hemostasis	3.5
MET 306	Blood Banking	5
MET 307	Introduction to Pathogenic Microbiology	2
MET 308	Microbiology	4
MET 310	Clinical Immunology	3.5
MET 311-312	Biochemistry	7.5
MET 314	Instrumentation	3

Summer Session

MET 337	Clinical Education	2
		42.5

Senior Year

MET 407	Interpretive Clinical Immunology ..	1.5
MET 408	Interpretive Microbiology	1.5
MET 409	Interpretive Hematology	1.5
MET 410	Interpretive Biochemistry	1.5
MET 411	Principles of Clinical Education and Supervision	3.5
MET 412	Clinical Correlations	1
MET 414	Advanced Instrumentation	2.5
MET 415	Special Topics in Clinical Laboratory Sciences	1-6
MET 483	Biochemistry Practicum	4.5
MET 484	Immunopathology/Virology Practicum	2.5
MET 485	Hematology Practicum	4.5
MET 486	Hemostasis Practicum	1.5
MET 493	Microbiology Practicum	4.5
MET 494	Clinical Microscopy Practicum	1
MET 496	Blood Bank Practicum	4.5
MET 497	Research Paper	1
		38-43

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Medical Technology, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

PROGRAM IN OCCUPATIONAL THERAPY

Since the primary focus of occupational therapy is the development of adaptive skills and performance capacity, its concern is with factors which serve as barriers or impediments to the individual's ability to function, as well as those factors which promote, influence, or enhance performance.

Occupational therapy provides service to those individuals whose abilities to cope with tasks of living are threatened or impaired by development deficits—the aging process, poverty and cultural differences, physical injury or illness, or psychologic and social disability.

The program in occupational therapy was initiated at Richmond Professional Institute in 1942.

In 1965 the graduate program leading to a Master of Science degree in basic professional education in occupational therapy was initiated. The School of Occupational Therapy became a department in the School of Allied Health Professions in 1970.

ACCREDITATION

Both the undergraduate and professional master's degree programs in occupational therapy at Virginia Commonwealth University are accredited by the American Occupational Therapy Association and the Committee on Allied Health Education and Accreditation, American Medical Association.

ACADEMIC ADMISSION REQUIREMENTS

Students wishing to pursue a course of study leading to a Bachelor of Science degree in occupational therapy offered through the School of Allied Health Professions may be admitted after two years of college work. A total of 62 semester credits from an accredited college or university is required for entrance into the professional curriculum.

English	6 credits
Biological Sciences	12 credits
Must include laboratory courses in human physiology and anatomy	
Psychology	12 credits
Must include developmental psychology and abnormal psychology	
Sociology	6 credits
Statistics	2 credits
These are considered minimum requirements. Students are encouraged to pursue further study in biology, psychology, and sociology.	

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM

Junior Year, Fall Semester		Credits
BIO 465	Functional Human Anatomy	4
OCT 301	Communications and Group Dynamics	3
OCT 303	Developmental Tasks and Occupational Roles I	1
OCT 305	Physical Dysfunction and Occupational Therapy I	3
OCT 307	Psychosocial Dysfunction and Occupational Therapy I	3
OCT 309	Skills Laboratory I	2
		16
Junior Year, Spring Semester		
BIO 429	Neuroanatomy	3
OCT 304	Developmental Tasks and Occupational Roles II	1
OCT 306	Physical Dysfunction and Occupational Therapy II	3
OCT 308	Psychosocial Dysfunction and Occupational Therapy II	3
OCT 310	Skills Laboratory II	2
OCT 312	History and Theory of Occupational Therapy	3
		15
Senior Year, Fall Semester		
OCT 403	Developmental Tasks and Occupational Roles III	2
OCT 405	Physical Dysfunction and Occupational Therapy III	5
OCT 407	Psychosocial Dysfunction and Occupational Therapy III	5
OCT 409	Skills Laboratory III	2
Elective (Optional)		3
		14-17

Senior Year, Spring Semester

OCT 412	Administration and Supervision of Occupational Therapy Services ..	3
OCT 414	Research Methods in Occupational Therapy	3
OCT 418	Occupational Therapy in Health Care	3
OCT 491	Special Topics in Occupational Therapy	3
Elective		3
		15

Fieldwork Sessions

OCT 493	Fieldwork—Psychosocial	1-9
OCT 494	Fieldwork—Physical Dysfunction ..	1-9
OCT 495	Fieldwork—Specialty (Optional) ...	1-9

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Occupational Therapy, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

PROGRAM IN PHYSICAL THERAPY

The Department of Physical Therapy of the School of Allied Health Professions was established in 1945 as the School of Physical Therapy at the Medical College of Virginia. Between 1945 and 1954 the program consisted of a 12-month professional course based upon at least three years of college work or the possession of an R.N. title. In 1954, a two-year program based on previous college work was initiated leading to the Bachelor of Science in physical therapy. The last 12-month professional course was offered during the school year of 1954-55. Between 1956 and 1968 the two-year professional program leading to the Bachelor of Science degree was the only program offered.

In 1946, a graduate program offering the Master of Science degree in physical therapy was established and continued to function until 1952 when it was discontinued. The program was reinstated in 1968 and expanded in 1971 under a full-time director.

ACCREDITATION

The program offered by the Department of Physical Therapy is accredited by the American Physical Therapy Association.

ACADEMIC ADMISSION REQUIREMENTS

Prerequisites for admission include a minimum of 64 semester credits (or 96 quarter cred-

its) in an accredited college or university. A grade of "D" in any of the required courses is not acceptable. The average grade for all required courses must be above "C."

This program of study must include a minimum of

1. English—6 semester credits, 9 quarter credits or the equivalent.
2. Biological Sciences—8 semester credits or 12 quarter credits including laboratory experience. This may be satisfied by general biology or general zoology. No more than half may be botany.
3. Chemistry—a course in general chemistry, 8 semester credits including laboratory experience.
4. Physics—a course in general physics, 8 semester credits including laboratory experience.
5. Mathematics—must have completed a minimum of 3 semester credits of college algebra and plane trigonometry or the equivalent.
6. Social Science—6 semester or 9 quarter credits in psychology—3 semester credits must be in general psychology. A total of 12 credits in social science.

Recommended courses to complete this requirement are child, adolescent, or abnormal psychology; personality development; psychology of adjustment; sociology; anthropology; economics; history; philosophy; or statistics.

In addition to the requirements some recommended courses include embryology; histology; comparative anatomy; vertebrate or human anatomy; kinesiology and human physiology; foreign languages, such as Latin, French, or German; analytic geometry; calculus; and courses in physical education dealing with an analytical approach to human movement.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

PROGRAM CHANGE IS PLANNED FOR LATE 1980s

The department is preparing for a change in the entry-level program. The new program will

lead to a Master of Science in physical therapy and will replace the present Bachelor of Science entry-level program. The professional program is anticipated to be a three-year program which will include instruction at both upper graduate and graduate levels.

Since the exact date of initiation of this program is not known at this time, interested applicants are urged to keep informed of the developments by periodic contact with the Department of Physical Therapy, School of Allied Health Professions, Medical College of Virginia, Virginia Commonwealth University, Box 224, Richmond, VA 23298-0001, (804) 786-0234.

JUNIOR AND SENIOR YEAR CURRICULUM

<i>Junior Year</i>	<i>Credits</i>
PHT 301-302 Functional Anatomy	14
PHT 303 Microscopic Anatomy	4
ANA 403 Embryology	1
PHT 307-308 Functional Neuroanatomy	5
PHT 309 Rehabilitation I	1
PHT 310 Physical Agents	3
PHT 312 Physical Therapy Evaluation Procedures I	4
PHT 313 Clinical Problem Solving	4
PHT 314 Rehabilitation II	3
PHT 394 Clinical Practicum I	1
PHT 395 Clinical Practicum II	2
PIO 461 Introduction to Human Physiology	3
PAT 301 Basic Pathology	2
	<hr/> 47
<i>Senior Year</i>	
PHT 406 Physical Therapy Seminar	1
PHT 407-408 Therapeutic Exercise	12
PHT 409 Physical Therapy Evaluation Procedures II	3
PHT 411 Orthopedic Physical Therapy	5
PHT 412 Clinical Science	4
PHT 413 Orthotics and Prosthetics	3
PHT 414 Cardiopulmonary Physical Therapy	4
PHT 416 Physical Therapy Management	2
PHT 493-494 Clinical Practicum III	1.5
PHT 495-496 Clinical Practicum IV	8
	<hr/> 43.5

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the Department of Physical Therapy, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.

PROGRAM IN RADIATION SCIENCES HISTORY

A program in radiologic technology has been offered by MCV/VCU since the 1930s. A one year on-the-job training certificate program was offered until 1961 when it was lengthened to 24 months. In 1966, a curriculum was approved by the Council on Technologists Affairs of the American College of Radiology, American Medical Association, and the Southern Association of Colleges and Schools that offered the graduate an Associate in Science degree in radiologic technology. Students were accepted into the associate degree program beginning with the fall semester, 1966. The 24-month certificate program was discontinued with the last class graduating in 1973.

An undergraduate baccalaureate program for radiologic technologists was begun in 1979. The program leading to a Bachelor of Science degree offers concentrations in either radiologic technology education, radiology administration, or nuclear medicine technology. Further information on undergraduate programs descriptions may be found in the *Medical College of Virginia Bulletin*.

ACCREDITATION

The program of radiologic technology (associate in science degree) is accredited by the Committee on Allied Health Education and Accreditation. Upon completion of the program, the student is eligible for the national examination given by the American Registry of Radiologic Technologists.

ACADEMIC ADMISSION REQUIREMENTS

Candidates for admission to the program must have completed high school or have passed a GED examination. Transcripts of high school work and Scholastic Aptitude Test (SAT) scores must be submitted with the application. Applicants must also submit scores from the Examination for Schools of Health Related Technologies. Candidates are encouraged to obtain some hospital experience, either as a volunteer or as an employee. Such experience should preferably be in the Department of Radiology, but may be elsewhere in the hospital.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the

Medical College of Virginia Bulletin or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

FIRST AND SECOND YEAR CURRICULUM

		Credits	
		Fall	Spring
First Year			
ENG 101	Composition and Rhetoric	3	
ENG 102	Composition and Rhetoric		3
BIO 101	General Biology	3	
BIO 205	Basic Human Anatomy		4
RTE 101	Radiographic Procedures I	4	
RTE 103	Radiography I	3	
RTE 104	Radiography II		3
RTE 105	Patient Care and Ethics	3	
RTE 194	Clinical Education		3
MAT 100	College Algebra I		3
		16	16

Summer Session

BIO 206	Human Physiology	4	
RTE 196	Clinical Education II	5	
RTE 292	Independent Study Radiography	2	
		11	

Second Year

		Fall Spring	
PHY 201	General Physics	4	
PHY 202	General Physics		4
RTE 201	Radiographic Procedures II	4	
RTE 203	Medical and Surgical Diseases I	2	
RTE 204	Medical and Surgical Diseases II		2
RTE 293	Clinical Education III	5	
RTE 294	Clinical Education IV		5
RTE 208	Radiation Protection		2
PSY 101	General Psychology		3
		15	16

Summer Session

RTE 207	Radiographic Physics	3	
RTE 211	Radiographic Procedures III	2	
RTE 213	Radiography III	2	
RTE 295	Clinical Education V	5	
		12	

BACHELOR OF SCIENCE PROGRAM

The Department of Radiation Sciences offers a program leading to the Bachelor of Science degree, with an area of concentration in either education, administration, or nuclear medicine technology. The program is designed to provide advanced theoretical and practical education for the individual who wants to become an educator in radiologic technology or an administrator in a

radiology department. The core curriculum consists of professional courses offered within the department. Additional course requirements in the area of concentration are offered in other departments of the university.

In an effort to provide upward career mobility to radiographers through advanced education and specialization, and to meet manpower needs for nuclear medicine technologists, the department also offers nuclear medicine technology as an area of concentration within the baccalaureate curriculum. The curriculum includes core courses within the department and academic and clinical work in the area of specialization.

ACADEMIC ADMISSION REQUIREMENTS

Candidates for admission to the upper-division program must meet the following requirements:

- A. Be a registered or registry-eligible radiologic technologist (A.R.R.T.) and possess an associate degree from an accredited college or university
- or
- B. Be a registered radiologic technologist (A.R.R.T.) and have successfully completed ("C" grade or better) 3 semester credits of college algebra or equivalent and 3 semester credits of basic college English.

A high school transcript, transcripts of all college work and/or radiography training, and a copy of the registry examination report must be submitted with the application.

Students admitted without an associate degree (option "B" under admission requirements), must complete the following liberal arts requirements in addition to their major curriculum:

- college algebra 3 semester credits
- English 6 semester credits
- general psychology 3 semester credits
- anatomy/physiology 6 semester credits
- general physics 8 semester credits

Students applying for the nuclear medicine curriculum are strongly encouraged to have completed two semesters of general college chemistry prior to admission. If this is not taken prior to admission, the student will be required to complete it as part of the required curriculum.

Most students will be required to appear for a personal interview as part of the application process. Part of this interview will be a written physics exam. (Information concerning this ex-

amination is provided prior to the interview.)

For information about additional requirements for admission, the specific procedures for application for admission and requirements for promotion and graduation, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM EDUCATION CONCENTRATION

<i>Junior Year, Fall Semester</i>		<i>Credits</i>
EDU 300	Foundations of Education.....	3
CRS 301	Pathophysiology for Radiographers I.....	1
HCM 300	Health Care Services I.....	3
CRS 309	Physics for Radiation Sciences and Ultrasound	3
HCM 301	Psychological Aspects of Illness and Disability	3
	Elective	3
		16

<i>Junior Year, Spring Semester</i>		
CRS 302	Pathophysiology for Radiographers II.....	1
PSY 305	Educational Psychology	3
CRS 310	Application of Physical Principles in Radiation Sciences and Ultrasound.....	3
PSY 321	Social Psychology.....	3
*AHP 351	The Allied Health Student	3
CSC 150	BASIC Computer Concepts	3
		16

<i>Senior Year, Fall Semester</i>		
*AHP 401	Instructional Methodology	3
EDU 407	Educational Media: Utilization	3
SPE 408	Speech for Teachers	3
CRS 411	Theory and Practice of Quality Assurance	3
	Elective	3
		15

<i>Senior Year, Spring Semester</i>		
*CRS 493	Educational Practicum	4
CRS 412	Radiographic Health and Ecology ..	3
	Educational Elective.....	3
	General Electives	6
		16
Total.....		63

JUNIOR AND SENIOR YEAR CURRICULUM IN ADMINISTRATION CONCENTRATION

<i>Junior Year, Fall Semester</i>		<i>Credits</i>
CRS 301	Pathophysiology for Radiographers I.....	1

HCM 300	Health Care Organization Services.....	3
CRS 309	Physics for Radiation Sciences and Ultrasound.....	3
BUS 321	Organization and Management I....	3
HCM 301	Aspects of Illness and Disability...	3
BUS 203	Introduction to Accounting I.....	3
		16

Junior Year, Spring Semester

BUS 204	Introduction to Accounting II.....	3
ECO 203	Introduction to Economics.....	3
CRS 302	Pathophysiology for Radiographers II.....	1
BUS 323	Legal Environment of Business....	3
CRS 310	Application of Physical Principles in Radiation Sciences and Ultrasound.....	3
BUS 331	Personnel Management.....	3
		16

Senior Year, Fall Semester

HCM 306	Legal and Regulatory Controls in the Health Industry.....	3
*CRS 405	Applied Radiology Management...	3
HCM 406	Personnel Management in Health Care Facilities.....	3
CRS 411	Theory and Practice of Quality Assurance.....	3
HCM 408	Management in Health Care Facilities.....	3
		15

Senior Year, Spring Semester

*CRS 494	Management Practicum.....	4
CRS 412	Radiographic Health and Ecology.....	3
CRS 150	BASIC Computer Concepts.....	3
	Electives.....	6
		16
Total.....		63

JUNIOR AND SENIOR YEAR CURRICULUM IN NUCLEAR MEDICINE CONCENTRATION

Junior Year, Fall Semester

		<i>Credits</i>
HCM 300	Health Care Services.....	3
HCM 301	Aspects of Illness and Disability...	3
	Restricted Elective.....	3
CRS 301	Pathophysiology I.....	1
*CRS 303	Orientation to Nuclear Medicine...	2
CRS 309	Advanced Physics for Radiation Sciences/Ultrasound.....	3
		15

Junior Year, Spring Semester

CSC 150	Computer Concepts.....	3
CRS 302	Pathophysiology II.....	1
CRS 310	Application of Physical Principles in Radiation Sciences and Ultrasound.....	3
*CRS 312	Nuclear Medicine Instrumentation and Computer Techniques.....	4
*CRS 394	Clinical Education I.....	2
	Elective.....	3
		16

Junior Year, Summer Session

*CRS 313	Clinical Nuclear Medicine: Non-imaging Techniques I.....	3
*CRS 318	Clinical Nuclear Medicine: Imaging Techniques.....	3
*CRS 396	Clinical Education II.....	5
		11

Senior Year, Fall Semester

CRS 411	Theory and Practices of Quality Assurance.....	3
*CRS 417	Radiopharmacy.....	2
CRS 419	Physics for Nuclear Medicine and C.T.	3
*CRS 495	Clinical Education III.....	7
		15

Senior Year, Spring Semester

CRS 412	Radiation Health and Ecology.....	3
*CRS 491	Senior Seminar: Nuclear Medicine.....	1
*CRS 496	Clinical Education IV.....	8
CRS 497	Senior Nuclear Medicine Project...	3
		15
Total.....		72



The School of the Arts encourages students to develop a highly professional attitude toward their work and the solution of significant creative problems.

PART VIII—School of the Arts

MURRY N. DEPILLARS

Dean

ROBERT F. HESTER

Associate Dean

THOMAS H. DESMIDT

Associate Dean

SUE ANN MESSMER

Assistant Dean

JOAN MULLER, Librarian

School of the Arts

WILLIAM STEWART, Director

Graduate Studies

MARILYN ZEITLIN, Director

Anderson Gallery

JOHN BRYAN, Director

Faculty Research and Development

The School of the Arts of Virginia Commonwealth University had as its beginning a sculpture course offered in 1926. In 1928 a one-faculty art department was formed under the direction of Miss Theresa Pollak and since that date has grown to its present organization, achieving national recognition through its quality programs in the visual and performing arts.

In 1969 the Department of Dramatic Art and Speech and the School of Music, formerly independent units within Virginia Commonwealth University, were combined with the School of Art to form the present School of the Arts.

The School of the Arts is accredited by the National Association of Schools of Art and the National Association of Schools of Music.

The School of the Arts offers a distinctly professional program in which students devote the greater portion of each day to professional

courses in the arts. Located within an urban complex of higher education, students are provided with the advantages of comprehensive facilities as well as professionally competent faculty. It is the only state-aided professional school of the arts in the South and one of the few in the nation offering a professional curriculum within a combined academic and professional environment.

The purpose of the School of the Arts is to enliven and enrich literacy in the visual and performing arts through the advanced thought and perception of its students and its faculty. Its intent is to develop innovative approaches to the making and comprehension of works of art which elaborate upon the complexities of contemporary man. These works of art clarify and give meaning to the circumstances within which men find themselves. To sustain inquiry into the nature of being and becoming, and to strengthen the artistic process and products that reflect that inquiry, constitute a major objective for the School of the Arts.

Each department contributes to the solution of, and encourages students to approach and resolve aesthetic, intellectual, and technical problems with scholarly analysis and experimentation, informed discrimination, and environmental awareness. In short the School of the Arts encourages students to develop a highly professional attitude toward their work and the solution of significant creative problems.

DEGREE PROGRAMS

Baccalaureate programs within the School of the Arts are designed to prepare creative leaders in the visual and performing arts professions. Emphasis is placed on the development of individual competencies in the arts through the following departments which make up the School of the Arts:

Art Education
 Art History
 Communication Arts and Design
 Crafts
 Dance/Choreography
 Fashion
 Interior Design
 Music
 Painting and Printmaking
 Photography (no undergraduate degree offered)
 Sculpture
 Theatre

The School of the Arts offers graduate programs leading to the Master of Fine Arts (M.F.A.), Master of Art Education (M.A.E.), Master of Arts (M.A.), Master of Music (M.M.), and Master of Music Education (M.M.E.) degrees with major and minor concentrations in various departments. Detailed information is available through the *VCU Graduate Bulletin*.

TRANSFER STUDENTS

Placement in all upper-level courses is determined by departmental faculty committees, following evaluation of the student's record, performance, audition, and/or the student's creative work. The student should contact the appropriate department chairman at the time of acceptance in order to arrange for such evaluation prior to enrollment.

SPECIAL CHARGES

All full-time majors enrolled in the School of the Arts are charged a comprehensive fee of \$50 each semester. Part-time majors are charged \$25. The money is prorated to the individual departments, and they determine the expenditures which result in a return to the students through materials, services and/or equipment, and may include models, field trips, or special lectures. Non-art majors enrolled in any of the numerous courses which require an additional outlay for materials will be billed for those individual fees by the Office of Student Accounting.

ACADEMIC REQUIREMENTS

All majors within the School of the Arts are expected to earn a minimum of "C" in all major work attempted in order to remain in their departments.

Evaluation of the record of each student will be made periodically by the department and the student's advisor. If, at any time during undergraduate studies, the department faculty concludes that a student is not demonstrating adequate progress in the area of concentration, the student will be advised to withdraw from that department.

GENERAL EDUCATION REQUIREMENTS

All students seeking the baccalaureate within the School of the Arts are required to fulfill specific general education requirements. These requirements are to be distributed as follows:

General Requirements	Credits
A. English 101-102	6
B. Restricted Electives—At least three credits must be earned as electives in each of the following areas, unless they are required elsewhere in the curriculum.	
1. Natural Sciences/Mathematics—all students who have not started or completed the mathematics sequence indicated in their curriculum must take the Mathematics Placement Test.	3
2. Social/Behavioral Sciences	3
3. Humanities	3

Students majoring in the School of the Arts should become familiar with the approved departmental restricted elective requirements in the department in which they are working. The student's faculty advisor will have a complete list of approved departmental restricted electives.

GENERAL INFORMATION

Matriculated students in a professional curriculum receive preference in enrolling for courses in that program. However, unless otherwise indicated, all courses are open to any student within the university.

In view of the sequence in which course work is arranged, only transfer students will be considered for admission at midyear.

With the exception of those in art history, all courses must be taken in the numerical sequence unless approved by the chairman of the depart-

ment in which they are listed.

In many of the courses, a considerable amount of work is necessarily done outside of class. Such work is done in addition to that of the scheduled classes which students are required to attend.

Departments within the School of the Arts reserve the right to retain examples of student work for permanent collections.

Students should contact the appropriate department chairman, prior to enrollment, for a more detailed curriculum outline than that which is contained in this bulletin.

UNDERGRADUATE CREDIT BY EXAMINATION

Recognizing that Virginia Commonwealth University enrolls students of varying backgrounds and experiences, the School of the Arts provides its students the opportunity to accelerate their education through "credit by examination." The conditions under which credit by examination may be given and the procedure for doing so are outlined in Part V of this bulletin.

ART FOUNDATION PROGRAM

CHARLES F. BLEICK
Director

In the visual arts all beginning and transfer students, as necessary, are enrolled in the Art Foundation Program, which is the prerequisite that provides the basic concepts, skills, and experiences necessary for admittance to advanced professional studio work in each department. In the program, career opportunities in the various fields of art are discussed. The student who has been accepted and placed in the Art Foundation Program will not have a departmental affiliation until after the screening of portfolios which occurs during the spring semester of the freshman year. At that time students will be given the opportunity to apply to the department of their choice. Departmental acceptances will be based on individual student performance and competency in the chosen area.

Art Foundation Curriculum

	Credits	
	1st Sem.	2nd Sem.
Studies		
AFO 101-102 Communication and Presentation	2	2

AFO 105-106 Communication Vehicles	2	2
AFO 109-110 Drawing Vehicles	2	2
AFO 111-112 Drawing Studio	2	2
General Studies		
AFO 105-106 Survey of World Art ...	4	4
AFO 107-108 Introduction to the Arts or Electives	1	1
ENG 101-102 Composition and Rhetoric	3	3
	16	16

ART EDUCATION

DANIEL J. REEVES

Chairman of the Department

Charles F. Bleick

Michael H. Ferris

Alan L. Landis

A. James Wright

David Burton

Priscilla C. Hynson

Betty Tisinger

The Department of Art Education provides the structure and resources for highly integrated courses of study designed to prepare students as comprehensive arts educators. Majors in the department are involved in a continuous, developmental sequence of experiences individually planned to capitalize on both the students' and the university's potentials for acquiring new knowledge and effecting viable alternatives for arts education in contemporary culture. The program reflects a strong emphasis on extensive preparation in the arts as a means for developing artistic sensitivity, critical analysis, perception, and interpretation of art forms.

Graduates of the program are eligible for concurrent teacher certification for elementary, middle, and secondary levels. The National Association of State Directors of Teacher Education and Certification (NASDTEC) has established a national system of reciprocity for teacher certification. More than thirty states, including Virginia, operate under this system of reciprocal agreements. The undergraduate degree in art education has an approved program status with the State Department of Education, and is therefore a part of the NASDTEC system.

Admission to the degree program follows successful completion of the freshman foundation program (or equivalent preparation in the case of transfer students from other institutions.) Admission should not be construed as a guarantee to graduation. The faculty reserves the right to counsel out of the degree program those students whose overall performance is unacceptable according to the administration's and faculty's standards, or whose performance indi-

cates that their potential cannot be fully recognized as a result of misalignment between the student's goals and the department's objectives.

The department also offers a variety of course options for persons of all ages from the community-at-large and for majors of other disciplines within the university. These offerings provide alternatives for persons to increase aesthetic sensitivities and to explore the potential of the creative process for extending human capacities.

Degree Requirements in Art Education

	<i>Credits</i>
Foundation Program Studios	16
Professional Education	
Includes Art Education Methods and Seminar, Human Development, and Student Teaching	37
Studios and Approved Electives	39
General Studies	
Includes English, Art History, Literature, Introduction to the Arts, Mathematics, Laboratory Science, American History, and Social Science	39
Health and Physical Education	4
	135

ART HISTORY

HOWARD RISATTI

Chairman of the Department

Richard C. Flint	C. Krishna Gairola
Sharon G. Jones	M. Barry Katz
Bruce M. Koplin	Sue Ann Messmer
Laurence Pace	Regenia Perry
James E. Phillips	

Part-time—
Frederika Jacobs

The Department of Art History offers its undergraduate majors a program of study which acquaints them with the humanistic discipline of art historical inquiry. While providing students with the opportunity for a broad education actively drawing upon the liberal arts and humanities, the department also emphasizes a close bond with the studio and performing arts, and enjoys a close relationship with the professional art school of which it is a part.

Recognizing the diverse interests of undergraduate students and the varied practical applications of art history after graduation, the department offers its majors a choice among four distinct curricula resulting in either the Bachelor of Arts (B.A.) or Bachelor of Fine Arts (B.F.A.) degrees. The B.A. degree (curricula A, C, and D) provides a course of study focusing on aca-

demical disciplines in the liberal arts while the B.F.A. degree (curriculum B) is designed to integrate the study of art history with that of art studio. Curriculum A: a program with a liberal arts curriculum which is an academic course of study opening to the student the scholarship and research methods of not only art history, but related disciplines in the humanities. This program would offer the student the best possible background for future graduate work in art history. Curriculum B: a program with a studio orientation providing the student with the opportunity to study art history with a simultaneous involvement in the studio areas. The opportunity to delve into the interrelationships between the study of art and the actual making of objects is an ideal program for the artist who is vitally concerned with discovering the past and understanding the present. Curriculum C: a program which prepares the undergraduate who is committed to a future in art conservation for advanced graduate work in the field. The conservation curriculum is an intense course of study with rich possibilities for careers in the private sector, museums, and galleries, as well as teaching. Curriculum D: a program with a museum-training orientation which calls upon the excellent resources in the Richmond and Virginia areas. The uniqueness of the program, as well as its strength, is the opportunity it provides the student to intern in a regional museum.

A minor in art history is also available, consisting of 18 credits in art history.

Degree Requirements in Art History

	<i>Credits</i>
Liberal Arts Curriculum (A)	
Studios	7
General Studies	
English 101-102	6
Literature	6
French or German	14
History	15
Art History	42
Aesthetics or Criticism	3
Archaeology, Religion, Anthropology, or Cultural Geography	9
Approved Electives (must include 3 credits in natural sciences/mathematics)	24
	126
Art History/Studio Curriculum (B)	
Studios	
Foundation Program	16
Fine Arts	56
General Studies	
English 101-102	6

Literature.....	6
Art History.....	29
Introduction to the Arts.....	2
French or German.....	10
History.....	6
Aesthetics or Criticism.....	3
Electives (must include 3 credits in natural sciences/mathematics).....	<u>6</u>
	140
Pre-Conservation Curriculum (C)	
Studios	
Fine Arts.....	18
Art Conservation.....	18
General Studies	
Art History.....	27
English 101-102.....	6
Literature.....	6
History.....	9
French or German.....	14
Mathematics.....	7
Chemistry or Physics.....	18
Museum Methods.....	3
Electives.....	<u>6</u>
	132
Museum Training Curriculum (D)	
Studios	
Fine Arts.....	9
Conservation.....	9
Photography.....	2
General Studies	
Art History.....	36
English 101-102.....	6
Literature.....	6
French or German.....	14
History.....	9
Business.....	3
Aesthetics or Criticism.....	3
Humanities Electives.....	6
Museum Training.....	15
Electives (must include 3 credits in natural sciences/mathematics).....	<u>9</u>
	127

COMMUNICATION ARTS AND DESIGN

PHILIP B. MEGGS

Chairman of the Department

John DeMao

Assistant Chairman of the Department

Nicolas A. Appgar	William O. Bevilacqua
Lindsay Brinks	(Professor Emeritus)
Kevin Cahill	Robert C. Carter
Richard Carlyon	Ben Day
Meredith Davis	John T. Hilton
Robert L. Foster	(Professor Emeritus)
Mary Anna LaFratta	Akira Ouchi
Robert Meganck	Charles B. Scalini
Kathleen F. Quarterman	Walter Wright
Nancy L. Strube	

Part time—
Jerry Bates
John Dworak
Frank Heller
Tim Priddy

Robert Brinkerhoff
Norbert Hamm
Sarah Lavicka
Sue Seif

The Department of Communication Arts and Design, in close cooperation with the Department of Photography, offers intense curricula in visual communications and design. Focus is upon the development of innovative thinking and creative problem solving abilities required for future professional excellence. The curriculum is oriented toward developing an understanding of visual form and structure, professional skills, and social and environmental awareness. The information/communication orientation of contemporary society calls upon this discipline to create visual images and concepts, relating people to their economic, social, cultural, and political lives.

In an era of rapid technological change, the department attempts to prepare students for future societal needs by fostering a spirit of experimentation and inquiry, and by integrating computer and electronic media study into the program.

After completion of the Art Foundation Program, a sophomore core program further develops fundamental design and drawing skills and introduces the major areas of visual communications: graphic design, illustration, photography, and media art. In the junior and senior years, students select an area of emphasis from the following:

1. **Design.** This concentration explores the design of visual communications. Intended primarily for those who wish to study graphic design, typography, and art direction, emphasis is upon visual design as a means to bring order and clarity to communications. In addition to traditional print media, students may elect courses in three-dimensional design and computer-assisted design.
2. **Illustration.** The illustration concentration stresses the creation of images for communication, exploring a variety of traditional and experimental media. Drawing and the development of a personal approach to visual communications are emphasized.
3. **Media arts.** This concentration is designed for students who desire major study in

cinematography, video, computer graphics, and audio-visual communications. Emphasis is placed upon the artistic potential and communicative uses of kinetic media in contemporary society.

4. **Photography.** This concentration focuses upon the creative and technical aspects of photography. It is designed for students who wish to explore photography as a personal language for artistic expression and as a means of creating images for visual communications.
5. **Interdisciplinary program.** Students with clearly defined personal goals may develop an individual program of study in the junior and senior years. A program plan encompassing more than one of the above emphasis areas is developed in close cooperation with the faculty advisor. The individual program proposal requires the approval of the department chairman.

Degree Requirements in Communication Arts and Design

	<i>Credits</i>
Studios	
Foundation Program	16
Visual Communications Fundamentals	24
Emphasis Area	32
Technical Workshops	8
General Studies	
Introduction to the Arts	2
English 101, 102	6
English 201, 202, 203, 204, 205, or 206	6
Art History and Theory	20
Approved Electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	12
Open Electives	6
	132

Advancement in this department is based on completion of prerequisite courses. Successful completion of the entire Art Foundation Program is required as a prerequisite for all 200 level studio courses in the Department of Communication Arts and Design. Twenty-four credits of visual communications fundamentals must be completed prior to entry into 300 and 400 level studio courses. Specific prerequisites for professional courses are identified in the course listings. Nonmajors who have completed the Art Foundation Program are permitted to take courses in the department by permission of the instructor when space is available.

Equipment, materials, and supplies in this program may cost \$1,000 per year, depending on the course of study.

CRAFTS

NANCY K. THOMPSON

Chairman of the Department

Allan A. Eastman (Professor Emeritus)	Bill Hammersley John Hawthorne
Kent Ipsen	Susan Iverson
C. James Meyer	Curtis Ripley
Christopher Silliman	

The Department of Crafts offers a professionally oriented program of study leading to the Bachelor of Fine Arts degree in ceramics, fiber-work/fabric design, glassworking, metalsmithing/jewelry, woodworking/furniture design.

Within the areas of specialization, courses are designed to assist the students in developing concepts, personal directions, and the necessary skills and technical competencies which will enable them to pursue a professional career or graduate study.

In addition to the major area of study, the students have the opportunity for a broad education in the liberal arts and humanities. Students are encouraged to select courses in other schools on the Academic Campus that will add to their general knowledge and educational experience. A student may elect a minor area of study in any department or program offering a minor. The minor may be used to fulfill career objectives or to investigate a discipline of secondary interest.

Career opportunities for craft majors include setting up an independent studio or business, operating or working in a gallery, restoration or repair work, teaching or participating in Artist-in-Residence programs in public schools, and consulting or designing for industry.

Courses in the department are open to all students in the university but must be taken in sequence starting at the 200 level.

Degree Requirements in Crafts

	<i>Credits</i>
Studios	
Foundation Program	16
Basic Crafts	16
Orientation to Crafts	1
Advanced Crafts	32
Painting/Printmaking or Sculpture Studio	8
General Studies	
Introduction to the Arts	2
English 101-102	6
Literature	6

Art History and Theory	14
Approved electives (must include 3 credits in social/ behavioral sciences and 3 credits in natural sciences/ mathematics)	18
Senior Seminar	1
Open Electives	10
	130

Minor in Crafts

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in crafts courses. Of these 18 credits a minimum of nine credits is required in upper-level courses.

DANCE/CHOREOGRAPHY

ANNE ANDERSEN

Chair of the Department

Chris Burnside Sharon Kinney

Melanie Snyder Kaye Weinstein

Frances D. Wessells
(Associate Professor
Emerita)

Visiting Professors—(1985-86)

Beth Corning Alan Sener

Holly Schiffer

Part time—

Adair Branner Anna Compton

David Davia JoAnne Draucker

Nesbit Hatch Susan Israel

Annette Holt John Massey

Karen Kessler Cas Overton

Pamela McCavitt Frances Wessells

The Department of Dance/Choreography offers a professionally oriented program of study designed to prepare students as dancers to be performers, choreographers, teachers, or participants in one of the many fields related to dance. Included in the curriculum are courses in dance techniques, such as ballet, modern, folk, ethnic, and tap; improvisation; choreography; production; and dance history. In addition, the program provides a variety of practical experiences in performing, choreography, staging, and teaching. These offerings enable students as dancers to develop themselves as sensitive, expressive, and competent artists with sound professional training in dance technique, a knowledge of dance philosophies, and a strong historical background which will allow them to function critically, independently, and creatively in dance as an art form.

Degree Requirements in Dance/Choreography

	Credits	
Dance Technique		
Modern	*16 or 20	*16 or 20
Ballet	*12 or 16	*12 or 16
Tap	2	2
Jazz	2	2
Ballroom and		
Folk or Afro-Caribbean	2	8
Dance Workshop	8	4
Improvisation	4	6
Dance Composition	6	6
Dance History	6	
Repertory		0
for Choreography Emphasis	3	6
for Performance Emphasis	0	3
Music for Dancers	3	3
Dancer as Teacher	3	
Choreography		0
for Choreography Emphasis	6	
Performance		6
for Performance Emphasis	0	3
Senior Project	3	
General Studies		6
English 101-102	6	3
Kinesiology	3	3
Art History	3	3
Social/Behavioral Science Elective ...	3	16
Approved Electives	16	
Open electives		0
for Choreography emphasis	15	12
for Performance emphasis	0	
	126	126

* The total for Modern and Ballet must be 32.

The B.F.A. degree program in dance/choreography contains a core curriculum of 80 credits from a total degree requirement of 126 credits. A daily technique class is part of this core. Beyond the first level of technique, students progress to the higher levels through audition or with permission of the instructor. Although the study of ballet is required for majors and encouraged for nonmajors, the emphasis of the degree program is upon modern dance. There are many opportunities for independent study within the core, including a possible semester spent in an intensive investigation of a dance-related subject in a professional environment.

By the junior year, students have the opportunity to choose one of two areas of emphasis: performance or choreography. The choice will affect their selection of required and elective courses, independent studies, and the option of a professional dance project. A senior project, which is a practical presentation, is required.

Within the School of the Arts, dance students have many opportunities to work collaboratively

with other students in the arts, choreographing plays, performing in theatrical productions, and participating in musical and multimedia events.

All dance majors have the opportunity to perform in formal concerts, informal showings, and lecture-demonstrations produced by the department.

Opportunities are provided for training in teaching, but students interested in earning state certification should consult their advisors. A senior project, which can be a practical presentation or a research paper, is required.

Applicants for the B.F.A. in dance/choreography will follow the admissions guidelines for arts students as described in the *VCU Undergraduate Bulletin*. An audition is required.

Minor in Dance

Students from any department in the university may declare a minor in dance. The minor consists of 27 credits: 16 credits of approved dance technique courses (to include modern, ballet, tap, and folk dance); DAN 105 Improvisation, 2 credits; DAN 205-206 Composition, 6 credits; and DAN 307 or 308 Dance History, 3 credits.

Most courses offered by the Department of Dance/Choreography are open to nonmajor students in the university. Any student can take the beginning technique courses in ballet or modern dance. However, placement in the other skill levels must be through audition or permission of the instructor.

FASHION

H. THEO YOUNG

Chairman of the Department

Don Breitingner	Robert Bride
Jill Drummond	Nancy Hollomon
Charles Koerner	Janus Watson
Sandra Wilkins	Otti Windmueller (Professor Emerita)

Part time—

Michael Agruso	Marsha Collier
Rick Daniels	Margaret Dillard

The Department of Fashion offers three curricula: fashion design, fashion illustration, and fashion merchandising. Each curriculum is specifically designed to stimulate creativity and cultivate independent thinking, intellectual professionals in the field of fashion.

The fashion design curriculum offers technical courses which provide basic skills required

in industry in the area of ready-to-wear and also haute couture. Individual designs are presented in two-dimensional form, developed and perfected through techniques employed in the fashion industry, and then executed in final three-dimensional form in fabric(s) appropriate to the design. Expenses for fabric and equipment average \$200 to \$600 a year.

The fashion illustration curriculum is designed to train the student in the skills of sketching wearing apparel on the fashion figure. Retail layout, retail illustration techniques, and fashion accessories with respect to advertising are also studied. A high degree of professionalism as well as individual creativity is strongly encouraged.

The fashion merchandising curriculum offers courses related to the business aspect of the garment industry. An awareness of contemporary styles, production techniques, quality control, consumer needs, and wholesale and retail marketing procedures are explored in depth to prepare the student to market merchandise that relates to a consumer from a variety of economic, cultural, and social life styles.

Field trips are an integral and vital part of a number of the courses offered within the department. Students are required to participate in these trips. The costs vary and are not included in the tuition fee.

Guest lecturers and critics are frequent visitors to the department. Students are required to attend.

Degree Requirements in Fashion

Credits

Fashion Design

Studios

Foundation Program	16
Garment Construction	4
Design	12
Draping	16
Patternmaking	8
Fashion Drawing	12
Tailoring	2

General Studies

English 101-102	6
Art History	14
Introduction to the Arts	2
Literature	6
Electives (Must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	19
Research in Textiles	3
Twentieth Century Fashion	3
Fashion Seminar	3

126

Fashion Illustration

	Credits
Studios	
Foundation Program	16
Life Drawing	12
Typographics	4
Basic Photography	4
2-D Composition	2
Fashion Drawing/Illustration	24
Introduction to Fashion Design	2
Retail Layout	4
General Studies	
English 101-102	6
Literature	6
Art History	14
Introduction to the Arts	2
Approved Electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	19
Twentieth Century Fashion	3
Fashion Seminar	3
Elective	5
	126

Minor in Fashion Illustration

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 19 credits in fashion illustration courses. A minimum of 9 credits is required in upper-level FDE courses. A Department of Fashion faculty advisor will counsel each student.

Fashion Merchandising

	Credits
Studios	
Drawing	4
Fashion Design	6
General Studies	
English 101-102	6
Literature	6
Art History	6
Mathematics and Accounting	9
Economics	3
Business Courses	15
Introduction to Psychology	3
General Sociology	3
Mass Communications	3
Fashion Merchandising	30
Twentieth Century Fashion	3
Research in Textiles	3
Fashion Seminar	3
Electives	23
	126

Minor in Fashion Merchandising

Students from any department in the university may declare a minor in fashion merchandising. The fashion merchandising minor consists of 19 credits. A minimum of 9 credits is required in upper-level FDE courses. A mini-

mum grade-point average of 2.0 must be achieved in the minor. A Department of Fashion faculty advisor will counsel each student.

INTERIOR DESIGN

PAUL PETRIE

Chairman of the Department

J. Jewett Field (Professor Emeritus)	Dorothy T. Hamilton (Associate Professor Emerita)
Nancy K. Davis	Ben D. Gunter
M. Buie Harwood	James T. Long
Craig H. Marlow	Pamela Philbrick
Han Schroeder	Ringo Yung

Part time—
Virginia K. Ault
Camden Whitehead

The Department of Interior Design offers a professionally oriented program which seeks to produce competent creative designers whose realistic design solutions are based on human needs in the contemporary environment. Mastery of design techniques, knowledge of resources, and an awareness of interrelating disciplines equip the student to pursue responsible and varied creative design positions or to engage in further academic endeavor.

Admission to the degree program follows successful completion of the freshman foundation program (or equivalent preparation in the case of transfer students from other institutions).

Field trips are an important part of some of the departmental courses, and students are required to participate in these trips. The expense of these trips is in addition to the tuition and should not exceed \$175 per year.

The department has two scholarships available to full-time interior design majors on the junior or senior level. They are the Roger Baugh Scholarship and the Hamilton-Field Scholarship. For further information contact the department chairman.

Degree Requirements in Interior Design

	Credits
Studios	
Foundation Program	16
Creative Design	24
Technical Knowledge	22
Communication Skills	12
General Studies	
English 101-102	6
Literature	6
Introduction to the Arts	2
Art History (includes ARH 433 and IDE 321-322) ..	17
Approved Electives (must include 3 credits in Social/Behavioral Sciences and 3 credits in	

Natural Sciences/Mathematics	21
Business Procedures	6
	132

MUSIC

RICHARD KOEHLER

Chairman of the Department

David Cordle, Assistant Chairman

Wesley Ball	L. Wayne Batty
Donald A. Bick ¹	Landon A. Bilyeu
Allan Blank	Kenneth Bowles
Harold W. Carle	Loran F. Carrier
Cynthia S. Donnell	Milton Cherry
Sandra Guerard	(Professor Emeritus)
Timothy Kloth	Jack M. Jarrett
Melissa Wuslich Marrior	Ardyth J. Lohuis
Robert Murray	Edward A. Mirr ¹
Gailyn D. Parks	Dika Newlin
Douglas Richards	Scott Reeves
John D. Savage	J. Lawrence Robinson
Donald Tennant	Frantisek Smetana ¹
(Professor Emeritus)	(Professor Emeritus)
Sonia K. Vlahcevic	Ronald B. Thomas
	Russell Wilson ¹

Part Time —

Nancy Andrew	Ronald Baedke
Peter Bay ¹	Paul Bedell ¹
Francile Bilyeu	Jennifer Burch ¹
William Comita ¹	Robert Daniel
Robert Dewell	Rolla Durham ¹
Eve Ann Eichhorn	Mary Jane Fitzpatrick
Jonathan Friedman ¹	George Gales
Bob Hallahan	Jill Hornickel
Melanie Kohn-Day	John D. MacNelly
Joseph McIntyre ¹	Janet Murray ¹
John Nebi	Lavada Parks
John Patykula	Rhonda Plessinger-Coltrane
Karen Savage	Marta Schworm ¹
Mary Jane Smith ¹	Ann Bakker Stokes
Scott Taylor	Philip Teachey ¹
Normal Wallack ¹	Al Waters
Erica Wheeler	Keith Young

The Department of Music, located in the Performing Arts Center, offers a comprehensive program designed to assist the student in acquiring those intellectual and musical competencies which are imperative for active musical participation in a modern society. The requirements for entrance and graduation are in accordance with the standards advocated by the National Association of Schools of Music. An audition and written general musicianship examination are necessary for admission, and students must meet the general admission requirements of the university. Audition information may be obtained by contacting Dr. David Cordle, Assistant Chairman, Department of Music, 922 Park Ave-

¹Member, Richmond Symphony Orchestra

nue, Box 2004, Virginia Commonwealth University, Richmond, VA 23284-0001. All freshmen entering the department are classified as "music foundation majors" for their first year. During the second semester of full-time study students may apply for admission into a specific degree program (applied music, music education, composition and theory). This decision may be postponed but must be made by the end of the fourth semester.

The Department of Music offers a program that leads to the Bachelor of Music Education degree. The program includes those requirements necessary to qualify for the Collegiate Professional Certificate issued by Virginia. The requirements for the degree may be changed to meet those for certification in other states.

The core of the instructional program is Comprehensive Musicianship (MHT 121 through 222). This is a competence-based course sequence which is fundamental to all major areas in the department. The four semesters deal with composing, conducting, performing, aural skills, elements of theory, orchestration, and music literature-history.

Electives in Music

University students who major in a field other than music may register for ensembles, private or class lessons, and a wide variety of courses in music. Class lessons in voice, piano and guitar, Music Appreciation, Afro-American Music, Fundamentals of Music Theory, Music for Elementary Classroom Teachers, and Special Offerings in Music are specifically designed for the nonmusic major. Other courses are open to those who have adequate background.

Minor in Music

Students from any department in the university may declare a minor in music. The music minor comprises 22 credits distributed among the areas of music history-theory, ensemble performance, private lessons, and music electives. Within the guidelines below, students have several options to meet their objectives. A music faculty adviser will counsel each minor regarding the selection of appropriate courses based on the student's competence and interest.

Music history and theory (9 credits) selected from MHT 106, 121, 243, 244, 245, 246, 421, 422.

Large ensemble (4 credits)

Private lessons (4 credits) one credit per semester; all credits to be earned on a single instrument. Students must pass Achievement Level I.

Music electives (5 credits) Suggested courses include APM 100, MHT 117, 201, 320, and music literature.

Fees

All students registering for private music lessons pay an applied music fee. This fee is in addition to the comprehensive fee charged only to majors in the School of the Arts. The cost for private lessons is \$85 per semester for one credit; \$170 per semester for two credits; and \$230 for three credits.

Community School of the Performing Arts

Pre-college, university, and adult students may receive private or class instruction through the Community School of the Performing Arts which is adjunct to the Department of Music. Information regarding registration and fee schedules may be obtained through the coordinator of the Community School of the Performing Arts, Gailyn Parks, 257-1168. No degree credit is granted for either private or class lessons taken through the school.

Degree Requirements in Music

Applied Music Achievement Levels. Eight achievement levels have been established for applied instrumental and vocal study. These levels are explicit in terms of expected repertoire, musicianship/style, technique, and sight-reading. "Honors" may be earned by students in any area who go beyond the eighth level. While freshmen normally enter on Level I, transfer students may be accepted on a higher level based on their entrance auditions. The table indicates the achievement levels required for graduation from each curriculum.

Applied Music	Level VIII
Composition	V
Music Education	VI

Recital/Convocation Attendance. All undergraduate majors are required to present four semesters of Recital/Convocation attendance for graduation. During each semester of enrollment, the student is required to attend a minimum of ten concerts or recitals plus 75 percent of all departmental convocations in order to earn credit.

Master Class Attendance. Master Class attendance requirements are equal in number to the Achievement Levels required in each curriculum.

Applied Music	8 semesters
Composition	5 semesters
Music Education	6 semesters

Applied Music

General Requirements (all areas except jazz studies)

	Credits
Comprehensive Musicianship	24
Ensembles and Chamber Music	12
Keyboard Skills	4
Music History, Theory and Composition	
Electives (300-400 level)	12
Principal Performing Medium	24
Secondary Performing Medium	4
Recital/Convocation Attendance	0
Master Class	0
Junior and Senior Recitals	0
Pedagogy	4

The following courses are also required of majors in the areas specified:

Brass, Percussion, Strings, Woodwinds

General Studies	
English 101-102	6
History	6
Approved Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in humanities)	32
	128

Organ

Improvisation	2
Organ Design and Literature	5
Service Playing	3
Lyric Diction	6
General Studies	
English 101-102	6
History	6
Approved Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in humanities)	18
	130

Piano

Improvisation	2
Piano Literature	4
General Studies	
English 101-102	6
History	6
Approved Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in humanities)	28
	130

Synthesizer

Composition (Secondary performing)	6
Electronic Music	5

General Studies		
English 101-102	6	
History	6	
Approved Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in humanities)	18	
Electives	9	
	130	
Voice		
Lyric Diction	6	
Pedagogy	4	
Vocal Repertoire	2	
Acting	6	
Approved Electives	20	
	130	
Jazz Studies		
Comprehensive Musicianship	24	
Ensembles and Chamber Music	16	
Jazz Studies	24	
Keyboard Skills	4	
Principal Performing Medium	24	
Recital/Convocation Attendance	0	
Master Class	0	
Junior and Senior Recitals	0	
General Studies		
English 101-102	6	
History (Jazz)	3	
Restricted Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in social/behavioral sciences)	15	
Electives	14	
	130	
Composition and Theory		
Advanced Scoring Techniques	3	
Classical Formal Techniques	3	
Conducting	4	
Contrapuntal Techniques	3	
Electronic Music	3	
Ensembles and Chamber Music	12	
Keyboard Skills	4	
Comprehensive Musicianship	24	
Principal Performing Medium (instrumental)	18	
Principal Performing Medium (composition)	6	
Score Reading	2	
Secondary Performing Medium and/or Class Lessons in Instruments	4	
Twentieth-Century Techniques	3	
Lyric Diction	6	
General Studies		
English 101-102	6	
Music History Electives	12	
Approved Electives (must include 3 credits in the natural sciences/mathematics and 3 credits in social/behavioral sciences)	19	
	132	
Music Education		
General Studies (includes English composition and Literature, Mathematics, Lab Science, American History, Social Science, Health, and Physical Education)		
	37	37

Professional Education (includes Human Growth and Development, Music Education foundations and methods courses, Student Teaching)		
	24	24
Music		
Comprehensive Musicianship	24	24
Conducting	4	4
Conducting Lab Ensembles	1	1
Lyric Diction	0	3**
Class Instruments	5	4
Methods Lab Band	1*	0
Keyboard Skills	4	4
Principal Performing Medium	21	21
Secondary Performing Medium	3	3
Large Ensembles	7	7
Junior Recital or Project	0	0
Master Class	0	0
Recital/Convocation Attendance	0	0
Electives	8	7
	139	139

* Required of instrumental majors only.

** Required of vocal majors only.

PAINTING AND PRINTMAKING

VICTOR KORD

Chairman of the Department

James A. Bradford	James A. Bumgardner
Jewett Campbell	Gerald M. Donato
(Professor Emeritus)	Michael H. Drought
Loretta Dunkelman	David Freed
Ann Renee Gower	Richard Kevorkian
Bernard Martin	James Miller
Theresa Pollak	Barbara Tisserat
(Professor Emerita)	Philip S. Wetton
Morris Yarowsky	

The Department of Painting and Printmaking attempts to establish a foundation for the creative person who desires to attain professional status as a painter or printmaker.

As the students progress, they are given an increasing amount of freedom; and as they demonstrate their acquisition of skill and insight, they are encouraged to explore more individually in all areas of their creative work. During the junior and senior years most students concentrate in the area of either painting or printmaking.

Degree Requirements in Painting and Printmaking

	<i>Credits</i>
Studios	
Foundation Program	16
Approved Studio Electives	4
Three Dimensional	4
Sculpture	4
Painting	16
Drawing	12
Printmaking	6

General Studies	
English 101-102	6
Literature	6
Introduction to the Arts	2
Art History	20
Approved Electives (must include 3 credits in the social/behavioral sciences and 3 credits in natural sciences/mathematics)	12
Open Electives	10
Painting and Printmaking Department Electives	12
	130

Minor in Painting and Printmaking

Successful completion of the Art Foundations Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in painting and printmaking courses. Of these 18 credits, a minimum of nine credits is required in upper-level courses.

PHOTOGRAPHY AND FILM

GEORGE D. NAN

Chairman of the Department

David M. Bremer	Clifton Dixon
John N. Heroy	Dale Quarterman
Joan Strommer	Nancy Lensen-Tomasson

The Department of Photography contributes to the educational need of the School of the Arts and the university at large. The department offers both basic and intermediate courses in black and white photography, and color photography to those who already have two years of course work or a sound photographic background, and advanced black and white and color workshops.

Beginning courses deal with fundamentals and techniques and develop the visual senses while the advanced courses expand in depth a student's knowledge of the visual senses and help the student to put together a well developed portfolio.

A limited number of classes in Super 8 and 16mm filmmaking techniques are offered on the intermediate and advanced level. No undergraduate degree is offered in photography.

Minor in Photography Film

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in photography/film courses. Of these 18 credits a minimum of 10 credits is required in upper-level courses.

SCULPTURE

JOSEPH H. SEIPEL

Chairman of the Department

Myron Helfgott	Charles R. Henry
Elizabeth King	Harold E. North
Charles C. Renick	Lester Van Winkle
(Professor Emeritus)	

The Department of Sculpture exists primarily for individuals who wish to structure their ideas by manipulating tangible materials. Students are encouraged to develop methods of problem solving and attitudes which will sustain them in their professional and personal growth.

Degree Requirements in Sculpture

	<i>Credits</i>
Studios	
Foundation Program	16
Sculpture	40
Painting and Printmaking	14
General Studies	
Introduction to the Arts	2
Art History	14
English 101-102	6
Literature	6
Approved Electives (must include 3 credits in social/ behavioral sciences and 3 credits in natural sciences/mathematics)	10
Open Electives	22
	130

Minor in Sculpture

Successful completion of the Art Foundation Program is a prerequisite for the minor concentration which shall consist of a minimum of 18 credits in sculpture courses. Of these 18 credits, a minimum of nine credits is required in upper-level courses.

THEATRE

C. THOMAS HOLLOWAY

Chairman of the Department

RICHARD L. NEWDICK

Assistant Chairman

Kenneth Campbell	Maurice L. Erickson
Elizabeth W. Hopper	Gary C. Hopper
Robert H. Janke	James W. Parker
Louis J. Szari	
Visiting Professor	
Anne Quirke	

The Department of Theatre offers an intensive program designed to provide students with the professional and cultural foundation essential to

attaining the highest standards of the art. Applicants are admitted only upon satisfactory demonstration of ability and genuine interest by means of interview as well as audition and/or portfolio presentation.

The department offers two Bachelor of Fine Arts degrees. One is in theatre with emphasis in either performance or production. The other is in theatre education and leads to teacher certification in theatre, speech, and English in public schools.

In these professional programs of theatre, there exists an environment where all aspects of theatre as art, craft, business, and education are taught and learned. For those who seek employment in the profession, the curriculum is designed to immerse a student in the practicalities of the theatrical world. During the first and succeeding years, the performer works daily with his voice, body, and imagination, while the designer/technician learns the tools of his trade in studio classes and through practical application. Prospective theatre educators engage in intensive teacher training activities leading to certification.

Degree Requirements in Theatre

	<i>Credits</i>
Performance Emphasis	
Acting	24
Voice	24
Movement	8
Theatre Design and Crafts	14
General Studies	
English 101-102	6
Literature	12
Arts History	12
Approved electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	6
Electives	24
	130
Design/Technical Emphasis	
Art Foundation	8
Acting	6
Theatre Design and Crafts	20
Theatre Design Electives	24
General Studies	
English 101-102	6
Literature	24
Arts History	12
Approved electives (must include 3 credits in social/behavioral sciences and 3 credits in natural sciences/mathematics)	6
Electives	24
	130
Theatre Education	
Acting	6

Voice/Speech	9
Movement	4
Theatre Design and Crafts	15
Directing/Practicum in Theatre	9
General Studies	
English 101-102	6
Literature	24
Arts History	6
Social Science	12
Math/Science	11
Professional Education/Health	27
Elective	3
	132

COURSES IN ARTS (ART)

Unless otherwise indicated, courses must be taken in numerical sequence.

001 Open Studio Workshop. Semester course; hours to be arranged. No credit.

190 Advanced Workshop, Drawing. Semester course; 1 lecture and 6 studio hours. 3 credits. Special summer work in drawing for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 191 and 192. Students are admitted only by invitation of the dean of the School of the Arts.

191 Advanced Workshop, Design. Semester course; 1 lecture and 9 studio hours. 4 credits. Special summer work in design for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 190 and 192. Students are admitted only by invitation of the dean of the School of the Arts.

192 Advanced Workshop, Art History. Semester course; 2 lecture hours, 2 credits. Special summer work in art history for the freshman applicant whose work shows potential worthy of consideration for advanced placement in September. Must be taken concurrently with ART 190 and 191. Students are admitted only by invitation of the dean of the School of the Arts.

392 and 492 Independent Study. Semester courses; 3 to 18 studio hours. 1 to 6 credits. Prerequisite: consent of department head and instructor. This course will be limited to those few students who have demonstrated an unusual level of ability and intense commitment to a particular area. The student must be enrolled in a regularly scheduled 300-level studio course. Offered to School of the Arts major only.

370, 371 Topics in Art. Semester courses; 3 lecture or 9 studio hours (or combinations thereof). 3, 3 credits. An in-depth study of a selected topic in art. See Schedule of Classes for specific topics to be offered each semester.

430/530 Guided Study Abroad. 3-9 credits. Permission of instructor required. Designed to enhance the student's knowledge by providing first-hand experience with the most significant contribution of aesthetic import within the geographic areas traveled.

COURSES IN ART FOUNDATION (AFO)

101-102 Communication and Presentation. Continuous course; 1 lecture and 3 studio hours. 2-2 credits. A founda-

tion course with the emphasis on conceptualization, sensing, and knowing. This course includes studies in preconceptions, value systems, visual semantics, attitudes, criticism, and analysis of visual phenomena. This course is also an introduction to the concepts and nature of materials. For beginning students in the School of the Arts. Offered to art majors only.

103–104 Communication Vehicles. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with emphasis on systems and nonsystems of spatial order, as well as color applications and theory. For beginning students in the School of the Arts. Offered to art majors only.

105–106 Survey of World Art. Continuous course; 4 lecture hours. 4–4 credits. A survey of the history and development of painting, sculpture, architecture, and related visual arts of major world cultures, including European, American, Oriental, African, Islamic, and Pre-Columbian. For beginning students in the School of the Arts only.

107, 108 Introduction to the Arts. Semester courses; 1 lecture hour. 1, 1 credits. An orientation course designed to provide a comprehensive understanding of the role of the visual arts as a significant contributing factor in the creation of a meaningful human environment. Attendance at selected music and theatre department performances required. For beginning students in the School of the Arts. Offered to art majors only.

109–110 Drawing Vehicles. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with the emphasis on traditional drawing, including perspective, anatomy, and artistic judgment. For beginning students in the School of the Arts. Offered to art majors only.

111–112 Drawing Studio. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. A foundation course with the emphasis on invention and imagination. This course is designed to challenge and develop the student's facility for combining known phenomena and personal imagery. For beginning students in the School of the Arts. Offered to art majors only.

113–114 Basic Drawing. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. A basic course covering free and schematic drawing skills and concepts. For beginning students in the School of the Arts. Offered to art majors only.

115–116 Fundamentals of Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. A course providing the basic skills, concepts, and language of two- and three-dimensional design as related to the visual arts. For beginning students in the School of the Arts. Offered to art majors only.

121–122 Introduction to Drawing. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. An introduction to the fundamentals of freehand drawing with an emphasis on representational drawing skills, perception, and traditional drawing materials. Not for art majors. Does not fulfill Art Foundation Program core requirements.

COURSES IN ART EDUCATION (AEN)

121–122 The Individual in the Creative Process. Continuous course; 1 lecture, 1 seminar, and 2 studio hours. 3–3 credits. Analysis of creative processes via reflection on the self-in-action. Participation in art experiences as a means to the interpretation and enjoyment of art forms, and the im-

plication of art for society. The course aims to increase perceptual openness, sensitivity to, and understanding of the artistic experience. Not offered for credit to art majors.

301–302 Art for Elementary Teachers. Continuous course; 1 lecture, 1 seminar, and 2 studio hours. 3–3 credits. The nature of art and its function in the lives of individuals and society is considered in addition to materials and methods for guiding the visual expression of children.

310 Concepts of Art Education I: Foundations of Art in Education. Semester course; 4 lecture hours, 4 credits. An examination of art education within the curricular structure of educational programs. Students will develop an understanding of the historical, philosophical, and sociological foundations of art in education, including art education's development and current roles. For art education majors only, or by approval of the department chairman.

311 Concepts of Art Education II: Curriculum and Instructional Procedures. Semester course; 3 lecture and 3 studio hours. 4 credits. A study of the principles of learning, instruction, and curriculum in art education programs. Students will develop teaching competencies through micro teaching experiences, analysis of instructional methods, and teaching styles. For art education majors only, or by approval of the department chairman.

353 Art and Perceptual Communication. Semester course; 3 lecture hours. 3 credits. A study of the function of art as communicative media through the senses. Emphasis will be placed on the analysis of the principles of art and design which affect the perception of various art forms.

401 Concepts in Art Education III: Elementary Materials and Practicum. Semester course; 3 lecture and 3 studio hours. 4 credits. A preparatory experience with observation and participation in art programs in elementary grades and nontraditional settings prior to student teaching. This course explores art materials and techniques suitable for this level, examines developmental performance levels and analyzes evaluation methods appropriate for art. For art education majors only, or by the approval of the department chairman.

402 Concepts in Art Education IV: Secondary Materials and Practicum. Semester course; 3 lecture and 3 studio hours. 4 credits. A preparatory experience with observation and participation in art programs in middle school, secondary school, and nontraditional settings prior to student teaching. This course explores art materials and techniques suitable for these levels, examines developmental performance levels, and analyzes evaluation methods appropriate for art. For art education majors only, or by approval of the department chairman.

404 Student Teaching Seminar. Semester course; 3 seminar hours. 3 credits. A seminar concurrent with student teaching which gives the students an opportunity to discuss and evaluate their progress in teaching assignments and other related activities. For art education majors only.

406 Art Education Seminar. 3 seminar hours; 3 credits. Students will evaluate their student teaching experiences with particular emphasis on changes in philosophy and their relation to curriculum development. For art education majors only.

408 Two-Dimensional Art Experiences. Semester course; 1 seminar and 4 studio hours. 3 credits. The course explores the media, techniques, and concepts of drawing, painting,

and printmaking. Not offered for credit to art majors.

409 Three-Dimensional Art Experiences. Semester course; 1 seminar and 4 studio hours. 3 credits. Exploration of sculptural concepts with three-dimensional materials such as wood, metal, clay, fiber, plaster, plastic, and glass. Not offered for credit to art majors.

411–412 Fashion Media. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Exploration of design concepts, media techniques, and actual execution in fabrics, jewelry, and ceramics with considerations for application to fashion design. For fashion design majors.

420 The Related Arts in Education. Semester course; 1 lecture, 1 seminar, and 2 studio hours. 3 credits. Investigation of contemporary patterns of expression which combine the visual and performing arts and their implications for elementary, middle, and secondary schools. Involvement in aesthetic experiences will serve as a vehicle for analysis of interrelationships among expressive forms and provide concepts for developmental growth in relation to curriculum designing. Open to all majors.

430 The Arts and Humanities in Education. Semester course; 1 lecture, 1 seminar, and 2 studio hours. 3 credits. Exploration of the perceptual and creative facets of arts and humanities curricula design in middle and secondary schools. The course establishes common denominators of human experience as a basis for integrating traditional disciplines into new patterns for aesthetic experiences through the students' direct involvement in a wide range of artistic activity. For teacher education majors only.

445 Special Topics. Semester course; variable credit. May be repeated for a maximum of 9 credits. A seminar and/or workshop offered on a variety of art education issues not included in the regular curriculum. See Schedule of Classes for particular topic covered each semester.

450 Art for the Exceptional Student. Semester course; 2 lecture and 3 studio hours. 3 credits. A study of the unique characteristics of exceptional students as related to involvement in the arts. The course examines handicapped, aged, gifted, talented, and other exceptional learners, and includes practicum and field experiences. Open to all majors.

COURSES IN ART HISTORY (ARH)

103, 104 Survey of Western Art. Semester courses; 3 lecture hours. 3, 3 credits. First semester: Prehistoric through Gothic. Second semester: Italian Renaissance through Modern. Illustrated lectures.

145, 146 Survey of Oriental Art. Semester courses; 3 lecture hours. 3, 3 credits. First semester: the art of India and Southeast Asia. Second semester: the art of China and Japan. Illustrated lectures.

209, 210/English 209, 210 American Art and Literature. Semester course; 3 lecture hours. 3, 3 credits. A general survey of the form and content of American art and literature with special emphasis on the relationships between visual and literary works. First semester: before 1865. Second semester: since 1865.

211, 212/English 211, 212 Western World Art and Literature. Semester courses; 3 lecture hours. 3, 3 credits. A general survey of the form and content of Western world art

and literature with special emphasis on the relationships between visual and literary works. First semester: ancient Greece through the sixteenth century. Second semester: seventeenth century to the present.

270, 271 History of the Motion Picture. Semester courses; 3 lecture hours. 3, 3 credits. The history of development of the motion picture from its early beginnings to the present, with both technical and aesthetic consideration. Appropriate films are shown in addition to lectures.

300 Prehistoric and Ancient Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of the artistic expressions of the major prehistoric and ancient cultures of Europe, the near East, Egypt, and the Aegean.

305 Classical Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of the development of Greek, Etruscan, and Roman architecture, sculpture, painting, and the minor arts from their beginnings to the early fourth century A.D.

310 Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. Survey of Western art and architecture between 300 and 1400 A.D.

315 Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. An examination of the Renaissance in Italy and Northern Europe. Painting, sculpture, and architecture of the fourteenth, fifteenth, and sixteenth centuries.

316 Northern Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. Painting, architecture, and sculpture during the North European Renaissance.

317, 318 History of Architecture. Semester courses; 3 lecture hours. 3, 3 credits. First semester: major architectural forms from ancient Egypt through Medieval period. Second semester: architecture in Europe and America from the Renaissance to the present.

320 Baroque and Rococo Art and Architecture. Semester course; 3 lecture hours. 3 credits. The art and architecture of Italy and northern Europe between 1600 and 1750.

325 Nineteenth Century Art and Architecture in Europe. Semester course; 3 lecture hours. 3 credits. ARH 103, 104 Study of European art and architecture between 1770 and 1900.

330 Twentieth Century Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of twentieth century art with emphasis on architecture, painting, and sculpture.

340 American Art and Architecture. Semester course; 3 lecture hours. 3 credits. A survey of painting, sculpture, and architecture from the Colonial period to the present.

342 Afro-American Art. Semester course; 3 lecture hours. 3 credits. A study of the art forms produced by Americans of African origin from the seventeenth century to the present with an emphasis on contemporary trends in black art.

350 African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. A study of the artifacts of some of the major art-producing tribes of Africa and Oceania.

355 Symbolic Expression in the Visual Arts. Semester course; 3 lecture hours. 3 credits. The nature of myth and allegory is presented through an introduction to central

themes in Western art, such as saints, heroes, gods, and archetypes with some comparisons to non-Western art.

360 Introduction to Conservation. Semester course; 3 lecture hours. 3 credits. An introduction to the art and science of art conservation. The course is designed to acquaint artists and art historians with the basic methods of deterioration, examination, and treatment of works of art.

365, 366 History of Painting Technology. Semester courses; 2 lecture and 3 studio hours. 3, 3 credits. An historical survey of the material and techniques employed by western artists in the fabrication of paintings. Includes lectures, demonstrations, and student manufacture of materials. Students will paint a replica of a selected painting from each period studied using only those materials available to the original artists. First semester: cave painting, Egyptian scroll painting, Graeco-Roman encaustic, Medieval illuminated manuscripts. Second semester: buon fresco, egg tempera painting, oil painting.

370 History of Animated Film. Semester course; 3 lecture hours. 3 credits. The history of animation as an art form, from early experimental to popular culture to independent animation. Design, structure, and technique are considered.

401 Art and Architecture of the Ancient Near East. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An in-depth analysis of the artistic developments in Mesopotamia, Iran, Anatolia, and the areas peripheral to these cultural centers from ca. 6000 B.C. to Ca. 300 B.C.

402 Art and Architecture of Ancient Egypt. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An in-depth analysis of the development of Egyptian styles from the origins of ancient Egyptian culture to its absorption in the Roman Empire. The major iconographical themes, both religious and secular, will be studied.

404 Studies in Prehistoric and Ancient Art. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 6 credits. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

405 Studies in Greek, Etruscan, and Roman Art and Architecture. Semester course; 3 lecture hours, 3 credits. May be repeated to a maximum of 6 credits. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

412 Early Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An investigation of medieval concepts of the late Roman and Byzantine Empires, and the art of Migrations. Subsequent developments in Carolingian, Ottonian, and Romanesque art and architecture are the main topics to be considered.

413 Gothic Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. Origins and developments of the Gothic style with emphasis on the architecture and sculpture of France.

414 Studies in Medieval Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period.

See Schedule of Classes for specific subject to be offered each semester.

415 Early Italian Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An investigation of painting, sculpture, and architecture of the Trecento and Quattrocento in Italy.

417 The High Renaissance. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. Intensive consideration of the great masters of Italian art in the early sixteenth century.

419 Studies in Renaissance Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

420, 421 The Baroque in Northern Europe; The Baroque in Southern Europe. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: 3 hours of art history or permission of instructor. First semester: an investigation of the painting, sculpture, and architecture of France and the Low Countries. Particular emphasis will be given to the diverse characteristics of the aristocratic and bourgeois stylistic trends of the period. Second semester: an investigation of the painting, sculpture, and architecture of Italy, Spain, Germany, and Austria. The relationship of church and state will be a primary theme of the course.

423 Rococo and Other Eighteenth Century Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An in-depth analysis of Rococo painting, sculpture, and architecture in Central Europe and a study of major movements of this period in France and England.

424 Studies in Baroque and Rococo Art and Architecture. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

425, 426 Neoclassicism, Romanticism, and Realism, Impressionism through Fin-de-Siecle. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: 3 hours of art history or permission of instructor. First semester: a detailed analysis of European art during the first half of the nineteenth century with special emphasis on French and English painting. Consideration will also be given to artistic and cultural interrelationships marking the transition from the eighteenth to the nineteenth century. Second semester: a detailed analysis of European art during the latter nineteenth century. Consideration will also be given to artistic and cultural interrelationships heralding the transition to the twentieth century.

429 Studies in Nineteenth Century Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

430 Modern Painting. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An analysis of the major movements in twentieth century painting.

431 Modern Sculpture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. The evolution of twentieth century sculpture considering major movements and artists.

432 / History 337 The Origins of Modernism, 1880–1930. Semester course; 3 lecture hours. 3 credits. An investigation of the interconnections between social, intellectual, and artistic change in Europe in the crucial period, 1880–1930. Focus is placed on such major figures as Nietzsche, Freud, Einstein, Picasso, Duchamp, and Stravinsky in an attempt to locate the origins of contemporary artistic and intellectual experience.

433 Modern Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An investigation of major architectural periods and achievements in commercial and residential designs from 1850 to the present, tracing the development of the International Style, traditional architecture, the evolution of the skyscraper, Art Nouveau, and the works of Henry Hobson Richardson, Louis Sullivan, and Frank Lloyd Wright.

435, 436 Contemporary Art I, II. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: 3 hours of art history or permission of instructor. First semester: an in-depth examination of art from 1940–1960. Will include discussion of background and context. Second semester: a continuation of detailed analysis of art from 1960 to the present.

439 Studies in Twentieth Century Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

441 American Architecture. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An in-depth investigation of major architectural developments in America from the Colonial period to the present, including an analysis of European prototypes.

442 Architecture in Richmond. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. History and origins of Richmond area architecture.

443 American Folk Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An examination of the development and history of three centuries of the American tradition of folk art applicable to the five major areas: painting, sculpture, furniture, decorated household objects, and architectural decoration.

444 Studies in American Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

445 The Art of India. Semester course; 3 lecture hours. 3 credits. Prerequisite: general background in art, history, or religion of the area. The Indus Valley civilization through Maurya, Sunga, Kushana, Andhra, Gupta, and Pallava periods.

447 The Art of Southeast Asia. Semester course; 3 lecture hours. 3 credits. Prerequisites: ARH 145, 146 or general background in the art, history, or religion of the area. The art of Burma, Malaya, Thailand, Cambodia, Indochina, and Indonesia.

449 Studies in Asian Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

454 Studies in African and Oceanic Art. Semester course; 3 lecture hours. 3 credits. May be repeated to a maximum of 6 credits. An in-depth examination of selected art and issues of the period. See Schedule of Classes for specific subject to be offered each semester.

455 Aesthetics and Modern Theories of Art. Semester course; 3 lecture hours. 3 credits. An investigation of modern aesthetic theories and concepts in art with a foundation in pre-modern aesthetics.

456 Ideas and Criticism in Art. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An in-depth examination of modern concepts in the literature of art criticism with particular emphasis on the principle writings of leading American critics.

459 Studies in Aesthetics, Theory, and Criticism of Art. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected topics. See Schedule of Classes for specific subject to be offered each semester.

461 Conservation Procedures. Semester course; 1 lecture and 6 laboratory hours. 3 credits. May be repeated. Open only to art history/pre-conservation majors having prerequisites of ARH 460, CHE 101–L101, 102–L102, and permission of instructor. An in-depth survey of the methods and techniques used in the examination of works of art including photo-documentation, X-radiography, microscopy, and microchemical analysis.

462 Conservation Laboratory. Semester course; 9 studio hours. 3 credits. May be repeated. Prerequisite: ARH 461 and permission of instructor. Students, under direct supervision of instructor, will treat the art they examined in ARH 461.

464 Studies in Conservation. Semester course; 3 lecture hours. 3 credits. May be repeated. Prerequisite: permission of instructor. An in-depth examination of selected topics.

469 Studies in Museum Methods. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An in-depth examination of selected topics.

470 History of Animated Feature Film. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An analysis of selected animated feature films, including animation combined with live action. Both American and foreign films will be considered.

471 Film Theory. Semester course; 3 lecture hours. 3 credits. Theories and criticism dealing with the medium, form, function, and psychology of film. Students will examine the medium through reading and discussion of such film theorists and aestheticians as Munsterberg, Eisenstein, Arnheim, Bazin, Kracauer, Burch, and Langer as well as through a comparison of film and the other arts.

472 History of Photography. Semester course; 3 lecture hours. 3 credits. Prerequisite: 3 hours of art history or permission of instructor. An investigation of the basic trends in the history of photography. This course will deal with the chronological development of the art, the role of the photographer, the properties of photography which make it unique, and those which ally it to the other visual arts.

474 Studies in Film. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth examination of selected topics. See Schedule of Classes for specific subject to be offered each semester.

489 Topics in Advanced Art History. Semester course; 3 lecture hours. 3 credits. May be repeated. An in-depth study of a selected topic in art history not included in the curriculum. See Schedule of Classes for specific topics to be offered each semester.

493 Museum Internship. Semester course; 9 to 18 studio hours. 3 to 6 credits. Course may be repeated with changing content to a maximum of 12 semester credits. Prerequisites: ARH 465, 466 or 565, 566, and permission of chairman of the art history department. Field work in a local or regional museum.

497 Directed Research Project. Semester course; 3 credits. Prerequisite: permission of instructor and department chairman. Advanced individual work on subject to be formulated in writing by student and instructor.

COURSES IN COMMUNICATION ARTS AND DESIGN (CDE)

201 Introduction to Typography. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: completion of Art Foundation Program. An introductory study of typography as a tool for visual communication. Not open to communication arts and design majors.

211 Typographics. Semester course; 3 lecture and 3 studio hours. 4 credits. An introduction to communication problem solving through the visual media of language. The fundamentals of typography and typographic design are explored in experimental and practical projects.

212 The Design Process. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 211. An introduction to communication design principles. The fundamentals of communication theory and the creation and manipulation of signs are explored in experimental and practical projects.

224 Intermediate Drawing Concepts. Semester course; 3 lecture and 3 studio hours. 4 credits. An intermediate drawing course with emphasis on drawing methods and processes to prepare the student for upper-level study in illustration, animation, and design.

225 Visual Thinking. Semester course; 3 lecture and 3 studio hours. 4 credits. An exploration of systems processes and media for expressing mental concepts in visual terms.

223/Photography 223 Media Arts Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. A survey of the artistic and communication uses of media in contemporary society. Cinematography, video, audiovisual communications, and microprocessor technology will be introduced.

251 Origins of Visual Communications. Semester course; 3 lecture hours. 3 credits. A history of visual communications and design from prehistoric times to the twentieth century.

252 Twentieth Century Visual Communications. Semester course; 3 lecture hours. 3 credits. An investigation of contemporary visual communications concepts, media, and images and their role in contemporary society.

301 Print Production. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A study of the tools and processes used in preparing a design for reproduction.

302 Graphics Processes and Techniques. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A workshop in graphics lab equipment and materials as design tools. Emphasis is on image creation and processing.

303 Two-Dimensional Comping. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A technical workshop which explores the techniques, materials, and procedures of making comprehensives.

304 Three-Dimensional Comping. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 211. A technical workshop in three-dimensional techniques for design presentation.

305 Line Techniques for Illustration. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 224. A workshop exploring various line drawing techniques as used in illustration.

307 Storyboard Design. Semester course; 1 lecture and 3 studio hours. 2 credits. A technical workshop introducing various methods of conceptualizing, planning, and visualizing films and videotapes in storyboard form.

311 Graphic Design I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 212. A course in printed communications exploring various design strategies, conceptual approaches, and form/content relationships. Projects stress theory and application.

312 Typographics II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 212. An intermediate exploration of typography as an expressive and functional communication vehicle. Emphasis is placed on defining effective design criteria to meet the reader's needs and the communicator's intent.

313 Package Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. A workshop in three-dimensional structures and two-dimensional graphics applied to problems of package design.

314 Three-Dimensional Graphic Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Study of three-dimensional structure in relationship to problems in exhibition and environmental design, including human factors, image, and typography.

321 Illustration Media and Techniques. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. An advanced course exploring various techniques, media, and materials used in creative illustrations.

323 Figure in Illustration I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 224. An introduction to drawing the human form and its application to illustration.

324 Figure in Illustration II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 323. Advanced problems focusing upon the interpretation of the human figure in illustration.

325 Objective Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced

course exploring illustration as a tool to communicate objective information.

327 Three-Dimensional Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course exploring form in real-dimension as an approach to illustrative expression. Relief and full-form projects are assigned.

331 Sound Communication. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: CDE 233. A basic audio course in the theory and production of audio tapes. Students will learn sound recording, editing, and composition for visual communications.

355 Design Methods in Visual Communication. Semester course; 3 lecture hours. 3 credits. An in-depth investigation of the theoretical aspects of the design process within the context of designing effective visual communications.

356 Studio Management. Semester course; 3 lecture hours. 3 credits. A study of business and management factors that relate to creative design. Topics include marketing, structure and organization, financial factors, ethical and legal aspects, and management of design, illustration, photography studios.

358 Anatomical Aspects of Illustration. Semester course; 3 lecture hours. 3 credits. Prerequisite: CDE 224. An advanced investigation of human structure and motion as applied to illustration. In addition to assigned readings, students will execute a series of anatomical drawings.

391 Topics in Design. Semester course; variable credit, 1–3 credits per semester. May be repeated to a maximum of 9 credits. Topical lectures in design issues and visual communications.

392 Research/Individual Study. Semester course; 1 to 2 lecture and 3 to 6 studio hours. 2 to 4 credits. The structuring, research, execution, and presentation of an independent project in visual communications under the direction of a faculty advisor. The student will be encouraged to become a self-generating problem seeker and solver with the ability to carry out self-stated goals. May be repeated for credit.

403 Senior Studio. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: senior status in the Department of Communication Arts and Design. Critical analysis and development of the student portfolio with emphasis upon an assessment of personal philosophy and objectives.

411 Graphic Design II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. An advanced course in visual communications exploring multi-component graphic design problems and complex information packaging such as technical or scientific data, specialized information, learning aids, environmental applications, and other multi-faceted information.

412 Typography III. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Advanced study in typographic design which focuses on the development of comprehensive and functional approaches to solving complex typographic problems.

415 Systems in Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. An investigation of the application of systems to various aspects of the design process in the field of visual communications.

416 Motivational Graphics. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Study in the development of visual communication performance criteria and practical strategies which influence audience attitudes and behavior.

417 Interdisciplinary Team Design. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311 and 312. Advanced projects in visual communication in which student design teams solve complex problems requiring collaboration.

418 Design Center. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 311, 312, and portfolio review by faculty. Course may be repeated for credit. A professional studio to give students practical experience working with faculty on design projects for university clients and nonprofit community organizations.

423 Editorial Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: CDE 321 and 311. An advanced course developing the student's skill at interpreting an author's manuscript. The major emphasis is given to illustrations appearing in books and magazines.

425 Experimental Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course encouraging the student to discover unusual techniques and to develop innovative solutions. The course stresses experimentation with novel media and surfaces.

427 Imagery for Children. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 321. An advanced course developing illustrations intended for the preschool and elementary child.

429 Personal Style and Directions in Illustration. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: permission of faculty. An advanced course to refine, strengthen, and focus the visual style and concepts inherent within the student. Emphasis will be upon developing personal insights, viewpoints, and a conceptual basis for illustrative form.

432 Video Art. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 233. A comprehensive studio course in the technical and creative aspects of videotape production as a medium for visual expression.

433 Animation Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. An exploration of various methods for creating film animation.

434 Animation Techniques. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 433. Design and production of film animation.

435 Media Synthesis. Semester course; 3 lecture and 3 studio hours. 4 credits. An exploration of the synthesis of sound and visual imagery into an effective media presentation.

436 Independent Video Production. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 432. Independent projects using portable and studio videotape equipment.

437 Computer Graphics Design I. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 233. Introductory study and investigation of the creative potential of computers in the design professions.

438 Computer Graphics Design II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: CDE 437. Exploration of the image-making style and potential of a microprocessor in conjunction with various peripheral devices such as digitizing tablet, penplotter, printer, color video display screen. Development of programming skills necessary for the creation of complex imagery.

COURSES IN CRAFTS (CRA)

201–202 Metalsmithing. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Investigation of metal forming processes such as forging, raising, and construction. Research in contemporary and historical metal forms.

211–212 Jewelry. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Investigation of jewelry making processes such as construction, repousse/chasing, surface embellishment, stone setting, and casting. Research in contemporary and historical jewelry forms.

221–222 Woodworking and Furniture Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Fundamental techniques in woodworking and fabrication of furniture involving basic joinery construction and design and mechanical drawing.

241–242 Beginning Ceramics. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Basic problems in the history, design, technology, and production of ceramic ware.

251–252 Introduction to Glassworking. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. A basic studio experience to acquaint the student with some of the areas of glassworking such as sandcasting, forming molten glass, stained glass, and Pate de Verre (fusing crushed glass in a mold).

261–262 Beginning Textiles. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Basic course involving frame loom and non-loom techniques with discussions of the tools, materials, heritage, and modern application of each craft covered.

282 Orientation to Crafts. Semester course; 1 lecture hour. 1 credit. Discussion of a variety of approaches to study within the craft media, stressing elements of creative activity which are basic to any involvement in making visually-oriented objects.

301, 302/401, 402 Advanced Metalsmithing or Jewelry. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 201–202 or 211–212. This course offers opportunity for specialization and development of techniques.

321, 322/421, 422 Advanced Woodworking and Furniture Design. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 221–222. Advanced design and construction investigation of varied materials, and machine processes.

341, 342/441, 442 Advanced Ceramics. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 241–242. Advanced problems in the design and production of functional and non-functional ceramic products.

351, 352/451, 452 Glassworking. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester.

Prerequisite: CRA 251–252. This course is concerned with techniques of forming molten glass, glass formulation and/or cold-working processes, and decoration of glass objects by etching, engraving, and/or fired enamels.

361, 362/461, 462 Advanced Textiles. Semester courses; 2 lecture and 6 or 12 studio hours. 4 or 6 credits per semester. Prerequisite: CRA 261–262. Advanced work in contemporary and traditional weaving techniques.

363–364 Fabric Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Exploration of pattern as a design concept and the development of technical skills for silk-screening on fabric.

367–368 Tapestry. Semester courses; 2 lecture and 6 studio hours. 4–4 credits. Origins of tapestry forms and execution of techniques.

369 Ancient Peruvian Textile Techniques. Semester course; 2 lecture and 6 or 12 studio hours. 4 credits. An examination of textile techniques perfected in ancient Peru and their application to contemporary fiber work. Pre-Columbian cultures will be studied to understand textile development. Course includes student duplication of techniques to better understand “structure” and the production of a personal object(s) utilizing these techniques and information.

409 Summer Metal and Jewelry Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific metal processes and techniques, such as fabrication, forging, forming, casting, enamelling, and electroforming. May be repeated for credit. See Schedule of Classes for specific course offerings.

429 Summer Woodworking Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific woodworking processes and techniques, such as joinery methods, laminate bending, steambending, etc. May be repeated for credit. See Schedule of Classes for specific course offerings.

445 Technological Developments in Ceramics. Semester course; 3 lecture hours. 3 credits. An examination of significant developments in the design and technology of ceramics from the prehistoric period to the present. The historical outline will include ceramics of Europe, the Orient and the Americas. Illustrated lectures.

446 Glaze Technology. Semester course; 3 lecture hours. 3 credits. Development, formulation, and application of ceramic glazes. The technology includes high, medium, and low firing ranges as well as color and analysis of glaze materials.

447 Ceramic Technology: Clay, Claybodies, and Slips. Semester course; 3 lecture hours. 3 credits. Study of clay from geological origins to practical application. Course includes development and application of clay bodies in different firing ranges, englobes, and slips.

448, 449/548, 549 Ceramic Workshop. Semester course; 9 studio hours, 3, 3 credits. Exploration in specific ceramic techniques such as raku, salt glaze, primitive firing, low temperature glazing.

455, 456 Survey of Glass. Semester courses; 3 lecture hours. 3, 3 credits. An examination of significant tech-

nological developments in glass from the past to present. First semester: ancient to sixteenth century. Second semester: seventeenth to contemporary. Illustrated lectures.

459 Summer Glassworking Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific glassworking processes, such as forming molten glass, casting, and coldworking technique. May be repeated for credit. See Schedule of Classes for specific course offerings.

463, 464 Fabric Design. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. Development of a personal direction and examination of direct color application techniques such as batik, airbrush, and fabric painting.

469 Summer Textile Workshop. Semester course; variable credit, 1, 2, 3 credits per course. 3, 6, 9 studio hours. Prerequisite: permission of instructor. Exploration of specific textile techniques and processes, such as multi-harness weaving, pulled warp, special dye processes and designing for printed fabrics. May be repeated for credit. See Schedule of Classes for specific course offerings.

482 Senior Seminar. Semester course; 1 lecture hour, 1 credit. Resume and portfolio preparation, small business practices and selling, exhibition, and other topics deemed necessary to the producing craftsman.

491 Topics in Crafts. Semester course; 1–3 credits. May be repeated for a maximum of 9 credits. Prerequisite: permission of instructor. A seminar or workshop on a selected issue or topic in the field of crafts. See Schedule of classes for specific topic(s) to be offered each semester.

493, 494 Fieldwork. Semester courses; 18 studio hours. 6, 6 credits. Prerequisite: consent of department chairman. Senior students are assigned on an individual basis. Fieldwork supervisor will arrange student's work and evaluate performance.

COURSES IN DANCE/CHOREOGRAPHY (DAN)

101–102 Modern Dance Technique I. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Beginning study and training in principles of modern dance technique. Emphasis on body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in a chosen manner.

105–106 Improvisation. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. An exploration of spontaneous body movement with the purpose of increasing body awareness, movement invention, and movement creativity.

109, 110/209, 210/309, 310/409, 410 Dance Workshop. Semester courses; 2 studio hours. 1 credit. Prerequisite: dance major or permission of instructor. Group exploration of techniques related to all areas of dance.

111–112 Ballet Technique I. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Beginning study of the principles of ballet technique. Emphasis upon vocabulary terms, body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in the ballet style.

113 Ballet Technique I. Semester course; 1 lecture and 2 studio hours. 2 credits. Prerequisite: DAN 111–112 or per-

mission of instructor. A continuation of study of ballet technique at the beginning level. Emphasis upon a stronger, more exact performance of the basic ballet steps, focusing on correct alignment, development of the body, and rhythmic and kinesthetic awareness.

114, 214, 314, 414 Summer Dance Workshops. Semester courses; variable credit. 1, 3 credits per semester. Flexible course offerings in dance technique, improvisation, composition, rhythmic training, and repertory. May be repeated for credit. See Schedule of Classes for specific course offerings.

121, 122 Tap Technique I. Semester courses; 1 lecture and 2 studio hours. 2, 2, credits. Beginning study and training in the principles of tap technique with emphasis upon style, body alignment, spatial patterning, flexibility, strength, and kinesthetic awareness to move the body in the style required for tap dancing.

126 Afro-Caribbean Dance. Semester course; 1 lecture and 2 studio hours. 2 credits. Dances based on the movements and the rhythms of Africa and the Caribbean.

131 Folk Dance. Semester course; 2 studio hours. 1 credit. A study of folk dances indigenous to European and early American culture, including the learning and performing of the steps accompanied by their traditional music and a discussion of the culture from which they sprang. Also stressed is the knowledge of how to transcribe written versions of these dances and how to set them to their appropriate music.

141, 142 Ballroom Dancing. Semester courses; 2 studio hours. 1, 1 credits. A study of basic ballroom dance steps and practice in their performance.

151, 152 Jazz Dance Technique I. Semester courses; 1 lecture and 2 studio hours. 2, 2, credits. Prerequisite: DAN 102 or permission of instructor. Study and training in the principles and concepts of jazz technique. Emphasis on body alignment, flexibility, balance, rhythmic awareness, and mastery of isolated movements of body parts. The course includes the exploration of the relationship between jazz music and jazz dance.

161, 162/ 261, 262/361, 362/461, 462 Rehearsal and Performance. Semester courses; hours arranged. 1 to 3 credits. Open to nonmajors by permission of instructor. Dance rehearsals and production work for a major dance concert. Each student is expected to devote a minimum of 50 hours per credit per semester to receive credit.

171, 172 T'ai Chi. Semester courses; 1 lecture and 2 studio hours. 2 credits. Study and practice of T'ai Chi, a Chinese exercise form, which is designed to bring one to full potential through balancing, aligning, and breathing exercises. The short Yang form, based on Taoist principles, strengthens the body while allowing for deep relaxation to take place. Application of T'ai Chi to creative dance technique is explored as a springboard for improvisation.

201–202 Modern Dance Technique II. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 102 or permission of instructor. Further study and training in the principles of modern dance technique on a low intermediate level with the expectation of better coordination of all elements into a sense of dance. This course may be repeated for a maximum of 8 credits on the recommendation of the chairman.

205–206 Composition. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Prerequisite: DAN 105-106 or permission of instructor. An introduction to the basic elements of choreography.

211–212 Ballet Technique II. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 112 or permission of instructor. Further training and practice in ballet technique. Emphasis upon a stronger, more exact performance of the ballet steps, focusing still on correct alignment, development of the body, and kinesthetic awareness. This course may be repeated for a maximum of 8 credits on the recommendation of the chairman.

221, 222 Tap Technique II. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. Prerequisite: audition or permission of instructor. Further study and training in the principles of tap technique.

232 Music for Dancers. Semester course; 3 lecture hours. 3 credits. Prerequisites: MHT 243 and DAN 101 or permission of instructor. An examination of the various traditional and nontraditional concepts which the dancer uses in collaboration with music. Course includes lecture, reading, listening, and movement assignments. Focus will be on the dancer's intelligent and justifiable choice of music through movement analysis.

243 Dynamic Alignment. Semester course; 1 lecture and 2 studio hours. 2 credits. Study of the basic principles of mechanical balance and postural alignment. Practice in the application of the major theories of alignment and techniques of realignment. Corrective exercises, breathing techniques, relaxation, guided imagery, self-awareness exercises, and Body Image work will be learned and practiced.

251, 252 Jazz Technique II. 1 lecture and 2 studio hours. 2, 2 credits. Prerequisite: DAN 151, 152 or permission of instructor. An in-depth study of movement styles and qualities in jazz dance. Advanced work on integrating music and movement with focus upon chronology of jazz music and corresponding dance forms.

301–302 Modern Dance Technique III. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 202 or permission of instructor. High intermediate study and training in principles of modern dance technique. Movement studies demanding greater strength and flexibility. Spatial patterns demanding increased coordination, kinesthetic awareness, and aesthetic sensitivity. This course may be repeated for a maximum of 8 credits on the recommendation of the chairman.

303–304 Performance. Continuous course; 2 lecture and 2 studio hours. 3–3 credits; Prerequisite: DAN 205–206 or permission of instructor. A study and rehearsal of choreography designed for large groups in traditional or non-traditional spaces. The student will perform in dances created by student choreographers.

305–306 Choreography. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Prerequisite: DAN 205–206 or permission of instructor. Extended explorations into the craft of choreography, utilizing traditional and nontraditional spaces culminating in a group piece.

307–308 Dance History. Continuous course; 3 lecture hours. 3–3 credits. A study and analysis of the history of dance including motivations, philosophies, and styles as

well as specific dancers in their relationships with one another and to history.

311–312 Ballet Technique III. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 212 or permission of instructor. Continued development in the skills and aesthetics of ballet. This course may be repeated for a maximum of 12 credits on the recommendation of the chairman.

371, 372 Repertory. Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisites: DAN 101–102 and permission of instructor. Study and rehearsal of roles in choreography produced by the faculty and/or guest artists, with the objective of achieving a performance level.

401–402 Modern Dance Technique IV. Continuous course; 1 lecture and 2 studio hours. 2–2 credits. Prerequisite: DAN 302 or permission of instructor. Advanced study and training in modern dance technique. This course may be repeated for a maximum of 12 credits on the recommendation of the chairman.

407 The Dancer as Teacher. Semester course; 2 lecture and 2 studio hours. 3 credits. Prerequisite: permission of instructor. The student learns to analyze and communicate movement in a variety of teaching situations. The student will have an opportunity to observe different teaching techniques and to practically apply learned teaching concepts and theories.

450 Professional Project. Semester course; 3–9 credits. An individualized program in research and/or practicum within a professionally-oriented organization subject to approval of the department faculty. May be repeated for a maximum of 12 credits.

451 Careers in Dance. Semester course; 3 lecture hours. 3 credits. Realistic aspects of the dance profession, as performer, teacher, and researcher.

490 Senior Project. Semester course; 3 lecture hours. 3 credits. The culmination of the student's learning experience in a final project within a chosen area of emphasis: choreography or performance. The choreography project must attain public performance status and the performance project must be a 30-minute public presentation exhibiting performing skills in both groups and solo works.

COURSES IN FASHION (FDE)

200 Introduction to Fashion Design. Semester course; 1 lecture and 3 studio hours. 2 credits. Students are familiarized with the process of fashion design as related to the garment industry. Current market trends, nomenclature, design problems, patternmaking, and draping will be investigated. Not open to majors in fashion design.

201–202 Garment Construction for the Professional. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. The basic principles involved in garment construction with emphasis on professional design-room practices in sewing, pressing, and finishing of garments. Knowledge of basic sewing skills is advisable.

205–206 Patternmaking. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of patternmaking, developing various styles from master pattern, and creating designs to be constructed in muslin.

207–208 Fashion Drawing I. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic drawing of the fashion figure. An anatomical study using various media.

211–212 Garment Construction. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. Students are exposed to basic sewing with emphasis on detailed construction, basic fitting, and pressing techniques. Simple garments will be constructed from commercial patterns. Not open to fashion design majors.

213–214 Design Theory. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of design: line, color, and texture are employed to develop styles in two-dimensional form for specific markets within the garment industry. Exposure to various sources for design inspiration will be encouraged.

215–216 Draping. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Basic principles of draping muslin on the dress form, the three-dimensional technique of making patterns.

240–241 Introduction to Fashion Merchandising. Continuous course; 3 lecture hours. 3–3 credits. Survey of merchandising practices and operational procedures in retailing related to the fashion industry. First semester: retail establishments and their organizational structure. Second semester: the role of the buyer and the buying process.

243 Fashion Salesmanship. Semester course; 3 lecture hours. 3 credits. No prerequisites. Principles of salesmanship are taught and techniques of salesmanship are developed by role-playing, and videotaped performances. Students learn modern sales procedures and practices.

301–302 Advanced Draping I. Continuous course; 1 lecture and 6 studio hours. 3–3 hours. Prerequisites: FDE 202, 206, 214, or permission of instructor. Advanced methods of draping on the dress form, development of designs from sketches, and the creation of original designs. Frequent critique of student designs.

303–304 Advanced Design I. Continuous course; 2 lecture hours. 2–2 credits. Prerequisite: junior standing with completion of all sophomore FDE studio requirements. Co-requisite: 301–302 for fashion design majors. Development of fashion designs related to the apparel industry. Weekly assignments or original ideas are presented in 2D sketches for discussion and critique. Development of a collection is analyzed. Extensive research in design and also fabrication of design(s) will be stressed. Classroom participation is imperative.

305–306 Advanced Patternmaking. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 202, 206, or permission of instructor. Methods of developing and grading professional patterns. Production techniques used in the garment industry will include layout, marking, cutting, and construction of designs.

309 Flat Pattern Design Workshop. Semester course; 1 lecture and 2 studio hours. 2–2 credits. The development of original ideas with the use of a basic pattern. Emphasis on designing, drafting patterns, and fitting muslin patterns for construction. Not open to fashion design majors. Offered evenings only.

311, 312 Advanced Garment Construction. Semester courses; 1 lecture and 2 studio hours. 2, 2 credits. The

emphasis is on teaching professional methods and designer techniques in the construction of garments. Commercial or original designs may be used. Not open to fashion majors.

313–314 Fashion Drawing II. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 208 or permission of instructor. Advanced drawing and rendering techniques of apparel on the fashion figure.

319 Twentieth Century Fashions. Semester course; 3 lecture hours. 3 credits. An in-depth study of twentieth century fashions from the historical and socioeconomic point of view. An analysis of current trends.

321–322 Fashion Illustration I. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 208 or permission of instructor. Ink wash techniques necessary in representing fabrics and the various values of textile patterns for illustration of women's, men's and children's fashions.

323–324 Retail Layout. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 208 or permission of instructor. Composition of fashion figures and related merchandise (accessories, hardline goods, etc.) in layout form. Seasonal and promotional layout designs will be covered with respect to reproduction in various types of publications.

327 Accessory Design. Semester course; 1 lecture and 3 studio hours. 2 credits. Creation and execution of original designs in millinery, handbags, and other accessories.

341 Fashion Merchandising II. Semester course; 3 lecture hours. 3 credits. Prerequisite: FDE 241, BUS 111 or equivalent. Practical application of buying practices and procedures as related to the fashion buyer. Subject matter covered includes retail inventory, markdowns, markups, turnover, open-to-buy etc.

343 Fashion Trends and the Consumer. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 307 or FDE 240–241. Survey of trends and consumer reaction and how they relate to marketing. The application of motivating influences such as consumer branding and fashion adoption.

390 Research in Textiles. Semester course; 3 lecture hours. 3 credits. A study of fabric: construction, finishes, and the properties of natural and man-made fibers. Fabric samples are studied in relation to their practical application by the designer.

391 Fashion Workshop. Semester course; variable credits 1–2 per semester; may be repeated for maximum total of 6 credits. A topical workshop offered in various areas of fashion not included in the regular curriculum. See Schedule of Classes for particular area to be covered each semester.

401–402 Advanced Draping II. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisites: FDE 302 and 306 or permission of instructor. Advanced methods and techniques for the designer of haute couture. Individual creativity and uniqueness of style are encouraged. Frequent critique of student designs.

403–404 Fashion Drawing III. Continuous course; 1 lecture and 3 studio hours. 2–2 credits. Prerequisite: FDE 314. First semester: emphasis on a variety of media and rendering techniques to communicate students' designs. Second semester: development of a portfolio.

405 Tailoring I. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: FDE 202 or equivalent. Construction techniques unique to tailoring.

406 Tailoring II. Semester course; 1 lecture and 3 studio hours. 2 credits. Open only to senior fashion design majors who have completed FDE 405 or by permission of the instructor. Design and execution of tailored garments.

411 Visual Merchandising I. Semester course; 3 lecture hours. 3 credits. Theory and practice of the principles and techniques applied in visual merchandising/display for retail.

412 Visual Merchandising II. Semester course; 3 lecture hours. 3 credits. Prerequisite: FDE 411. A continuation of FDE 411. The practical application of theories in visual merchandising. Actual displays will be created in real and simulated situations.

413-414 Advanced Design II. Continuous course; 2 lecture hours. 2-2 credits. Prerequisite: senior standing with completion of all junior FDE studio requirements. Co-requisite: 401-402 for fashion design majors. Development of fashion design related to the apparel industry. Weekly assignments of original ideas are presented in 2D sketches for discussion and critique. Extensive research and classroom participation are imperative.

421-422 Fashion Illustration II. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Prerequisites: FDE 314, 322. First semester: continuation of a variety of media and rendering techniques to develop individual style. Second semester: development of a portfolio.

423-424 Retail Illustration Techniques. Continuous course; 1 lecture and 3 studio hours. 2-2 credits. An in-depth analysis of the diverse techniques used in the field.

441 Fashion Coordination and Presentation. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Students learn to present fashion information through shows and written communiques. Fashion trends will be researched, analyzed, and planned for promotion.

443 Supervision and Management in Fashion Merchandising. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. This course will develop leadership skills needed by first-line supervisors. The study of human relations in the management hierarchy of the fashion industry will be emphasized.

445 Specialties in Fashion Merchandising. Semester course; 3 lecture hours. 3 credits. Prerequisite: FDE 240, 241. Analyzes various marketing practices as applied to special areas of soft goods. Market dates, discount advertising, commissions, etc., will be covered in bridal, imports, cosmetics, and other fashion accessories.

490 Fashion Seminar. 2 lecture and 3 studio hours. 3 credits. A professional seminar for senior fashion majors. Lectures will cover career opportunities, job preparation, and other topics according to the needs of the class. Work will also include production of a spring fashion show.

493 Fashion Internship. 3 credits. Open to senior fashion majors only. A practicum in which students apply on-the-job the formal classroom and studio training they have received in their option (design, illustration, merchandising) on campus. It may be a single internship for 3 credits or several (maximum 3) totalling 3 credits. Each is arranged by the

department chairman to meet the specific needs of the student.

COURSES IN INTERIOR DESIGN (IDE)

103-104 Introductory Studio Course. Continuous course; 1 lecture and 2 laboratory hours. 2-2 credits. A practical course in which the student becomes familiar with fundamentals of interior design through work with floor plans, furniture selection and arrangement, floor and wall composition, color harmony, wall paper, and other aspects of design. Not open to interior design majors. Offered evenings only.

201-202 Beginning Interior Design Studio. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Application of design theory and technique with emphasis on interior design through abstract and applied projects: the design process, spatial and functional analysis and design, applied human factors, behavior and perception, and the selection of materials and furnishings. Interior design majors only.

203-204 Interior Design and Architecture. Continuous course; 3 lecture hours. 3-3 credits. Contemporary theory and technique in interior and architectural design: manipulation of space, form, and light; structures, building methodology, and the nature of materials.

217-218 Great Houses and Monuments: Europe and America. Semester courses; 3 lecture hours, 3, 3 credits. Profusely illustrated lectures for those interested in historical architecture and furnishings. First semester: continental Europe. Second semester: England and America. Also valuable for persons anticipating European travel.

221-222 Interior Design Graphics. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Introduction to the various presentation media and techniques to provide basic communication skills such as drafting, rendering, perspective drawing, layout organizations, and model making for professional graphic presentations.

301-302 Environmental Factors. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Prerequisites: IDE 204 and 222. Support systems such as acoustics, illumination, heating, air conditioning, and plumbing are discussed and in the studio the principles are applied to interior situations. Interior design majors only.

311-312 Commercial Design. Continuous course; 4 lecture and 3 studio hours. 5-5 credits. Prerequisites: IDE 204, 212 and 222. Function and design is emphasized within a specific contract environment. This includes layouts, details, and specifications for professional presentation. Interior design majors only.

321-322 Design in Historic Interiors and Architecture. Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: ARH 103, 104, or AFO 105-106. A survey of the major styles in interior and exterior architecture and furnishings dating from ancient Greece. Emphasis is given to the styles in Italy, France, England, and America from the Renaissance to the middle of the nineteenth century.

331-332 Business Procedures. Continuous course; 3 lecture hours. 3-3 credits. Study of interior design business practices and workroom procedures. Interior design majors only.

341–342 Advanced Interior Design Graphics. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Prerequisites: IDE 202 and 222. Study of advanced interior design graphic communication skills including working drawings and interior details, complex three-dimensional space delineation, and experimentation with a variety of techniques and media.

401–402 Advanced Interior Design. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisites: IDE 302 and 312. Problems exploring period and contemporary design and their relationships are planned to meet the needs of specific clients. In keeping with the endeavor to prepare the students for the professional world, the problems are as varied as possible. Interior design majors only.

411–412 Trade Sources. Continuous course; 2 lecture hours. 2–2 credits. Comparative analysis of the major sources of supply and their products. When convenient, manufacturer's representatives will meet with the class.

421–422 Furniture Design and Construction. Continuous course; 1 lecture and 6 studio hours. 3–3 credits. Prerequisites: IDE 204 and 222. Original student furniture designs are developed through a coordinated study of structure and materials.

493 Interior Design Internship. Semester course; 3 credits. Prerequisite: consent of coordinator and department chairman. Supervised practical work experiences are coordinated with professional interior designers in the field.

COURSES IN APPLIED MUSIC (APM)

Upper-division undergraduate students may enroll for selected 500-level graduate courses with permission of the department chairman and instructor. See *VCU Graduate Bulletin* for course descriptions.

100 Aural Skills. Semester course; 2 laboratory hours. 1 credit. Development of skills in melodic dictation, harmonic identification and sight-singing. No degree credit for students enrolled in MHT 221–222.

161–162 Lyric Diction. Continuous course; 3 lecture hours. 3–3 credits. A study of English, Italian, ecclesiastical Latin, French, and German stage diction with practical experience in singing and phonetic transcription using the International Phonetic Alphabet.

173–174/273–274 Keyboard Skills. Continuous course; 2 laboratory hours, 1–1 credit. Acquisition of keyboard performance skills with emphasis on reading, keyboard harmony, and improvisation. Open only to music majors.

181–182 Class Lessons in Strings. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies on violin, viola, cello, or string bass. Acquisition of basic techniques on two additional string instruments.

183–184 Class Lessons in Woodwinds. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies on flute, clarinet, oboe, bassoon, or saxophone. Acquisition of basic techniques on two additional woodwind instruments.

185–186 Class Lessons in Brass. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies on trumpet, baritone, tuba, trombone, or

French horn. Acquisition of basic techniques on two additional brass instruments.

187–188 Class Lessons in Percussion. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies on snare drum. Acquisition of basic techniques on xylophone or timpani.

191–192 Class Lessons in Piano. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies at the keyboard with emphasis on finger dexterity and reading. No prior knowledge of music required. Not open to music majors.

193–194 Class Lessons in Voice. Continuous course; 2 laboratory hours, 1–1 credit. Achievement of performance competencies in voice including vocal production, diction, solo, and group performance.

195–196 Class Lessons in Guitar. Continuous course; 2 laboratory hours, 1–1 credit. Acquisition of performance competencies in guitar including chording, single-string technique, plectrum, and finger styles.

197–198 Class Lessons in Organ. Continuous course; 2 laboratory hours, 1–1 credit. Prerequisite: permission of instructor. Achievement of performance competencies in organ including pedal technique, coordination of hands and feet, and registration.

199 Recital/Convocation Attendance. Semester course; no credit. Course may be repeated without limit. Attendance at weekly departmental convocations and ten additional concerts or recitals each term. Music majors only.

271 Sight Reading. Semester course; 1 lecture hour. 1 credit. A practical course for singers and instrumentalists designed to develop facility in sight reading.

282 Conducting Lab Ensembles. Semester course; 1 laboratory hour. .5 credit. May be repeated once for credit. Reading and conducting experience with a band, chorus, or orchestra. Literature emphasized will be appropriate for elementary through secondary school groups. Offered only in the spring semester.

299 Master Class. Semester course; no credit. Course may be repeated without limit. Participation in weekly master classes in student's applied major area.

300-Level Private Instruction: Principal and Secondary Performing Mediums. Semester courses; repeatable without limitations; one half-hour or one hour private lesson per week. 1 to 3 credits. Extra fee required. One hour practice daily for each credit. Lessons are available in the following areas: bassoon, carillon (1 credit only), cello, clarinet, composition (3 credits only, by permission of instructor), double bass, drum set (undergraduate, 1 credit only), euphonium, flute, French horn, guitar, harp, harpsichord, oboe, organ, percussion, piano, saxophone, synthesizer, trombone, trumpet, viola, violin, and voice. In order to register for any private lesson, nonmusic majors must obtain correct course number in either Room 132, Performing Arts Center, or at the music table in the Mosque during registration; music majors need to consult their advisors.

370 Large Ensembles. Semester course; 3 laboratory hours. 1 credit. An audition is prerequisite for sections 1, 3, and 4. Sections: (1) orchestra, (2) concert band, (3) symphonic band, (4) chorus, (5) Choral Arts Society. Each section may be repeated up to eight times for credit.

373-374 Functional Jazz Keyboard I and II. Continuous course; 2 laboratory hours. 1-1 credits. The first semester is designed to give the non-keyboard major the necessary keyboard skills to function with the basic materials of jazz improvisation, composition, and arranging. The second semester focuses on basic formula chord voicings, common chordal progressions, and reading lead sheets and simple piano parts.

375-376 Score Reading. Continuous course; 2 laboratory hours. 1-1 credit. Prerequisite: APM 274 or equivalent. Acquisition of skill in reducing scores at the keyboard, beginning with simple three-part works and progressing to full instrumentation.

381-382 Conducting. Continuous course; 1 lecture and 2 laboratory hours. 2-2 credits. The student will put into practice his elementary knowledge of conducting to solve complicated or unusual musical situations such as those of irregular meters, conducting from the keyboard, and uncommon scoring.

383, 384 Musical Theater. Semester course; 4 laboratory hours. 2, 2 credits. Prerequisite: APM 193 or equivalent. An exploration of the fundamentals of musical theater including production, staging, and performing. Each course may be repeated for credit three times.

390 Chamber Ensembles. Semester course; 3 laboratory hours. 1 credit. Auditions required for all sections. Each section may be repeated up to eight times for credit. Sections: (1) Ensemble for New Music, (2) The Madrigalists, (3) Collegium Musicum, (4) Opera Workshop, (5) vocal ensembles, (6) piano ensembles, (7) accompanying, (8) Percussion Ensemble, (9) Percussion Lab Ensemble, (10) woodwind ensembles, (11) brass ensembles, (12) chamber orchestra, (13) string ensembles, (14) guitar ensembles, (15) small jazz ensembles, (16) Jazz Orchestra I, (17) Jazz Orchestra II, (18) Jazz Orchestra III.

393 Junior Project. No credit. Individual research project in the student's major field under the supervision of faculty.

394 Junior Recital. No credit. Public presentation of a half-length recital.

450 Performance Practice. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of performance practices including ornamentation, instrumentation, and stylistic considerations. Topics and emphases will change from term to term. Course may be repeated up to four times.

463-464/563-564 Pedagogy. Continuous course; 2 lecture hours, 2-2 credits. A study of the musical, physiological, and psychological aspects of teaching instruments or voice. Second semester will include practical experience in teaching students under faculty supervision. Sections: (1) piano, (2) voice, (3) organ, (4) percussion, (5) brass, (6) woodwinds, (7) strings, (8) guitar.

473-474 Improvisation. Continuous course; 2 laboratory hours, 1-1 credits. A course in which, through analysis, the student will acquire a knowledge of basic material which will provide a foundation for improvisation or extemporization.

485 Percussion Laboratory/Seminar. Semester course; 2 laboratory hours. 1 credit. Advanced course in specialized percussion techniques and literature designed for the performer, composer, and educator. Topics may include surveys of literature, notational problems, mallet making, and

instrumental maintenance. Topics will vary from semester to semester depending on the needs and interests of the class. May be repeated up to four times for credit.

493 Senior Project. No credit. Individual research project in the student's major field under the supervision of faculty.

494 Senior Recital. No credit. Public presentation of a full-length recital.

COURSES IN CHURCH MUSIC (CHM)

331 Multiple Choir Program. Semester course; 3 lecture hours. 3 credits. The organization of multi-choir programs in the church; children's choir methods and materials; handbell choirs. Offered alternate years.

332 Service Playing. Semester course; 1 lecture and 2 laboratory hours. 2 credits. The development of skills necessary for church service playing: transcription of piano and orchestral scores; accompanying and hymn playing; conducting from the console; the accompaniment of chant. Offered alternate years.

333 Organ Design. Semester course; 3 lecture hours. 3 credits. A study of the design and construction of the organ with emphasis on the styles developed by master builders of various eras. Offered alternate years.

431 Hymnology. Semester course; 3 lecture hours. 3 credits. A study of hymns and hymn tunes with emphasis on their development, style, and functions. Offered alternate years.

435 Liturgics. Semester course; 3 lecture hours. 3 credits. A study of the forms of public worship emphasizing the orders in current usage. The planning of weekly and special services. Offered alternate years.

437-438 Field Work in Church Music. Continuous course; 1-1 credit. Prerequisite: a position in a church is required for this course. Actual experience in playing for services and/or conducting a church choir as a steady, regular job, supervised by the instructor.

COURSES IN MUSIC COMPOSITION (MUC)

301 Classical Formal Techniques. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 222 or permission of instructor. The expansion of a brief musical statement into a larger structure with related sections.

315, 316 Contrapuntal Techniques. Semester course; 3 lecture hours. 3, 3 credits. Prerequisite: MHT 222 or permission of instructor. First semester concentrates on two-part writing, canons, species exercises, short two-voice pieces, and inventions. Three- and four-part writing, forms based on the chorale, contrapuntal variation forms, and fugue will be studied during the second semester.

405 Twentieth Century Techniques. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 222 or permission of instructor. Composition in and analysis of techniques associated with late Romanticism, Impressionism, Neo-Classicism, Expressionism, Serialism, and current avant-garde music. No degree credit for graduate composition majors.

406 Advanced Scoring Techniques. Semester course; 3 lecture hours. 3 credits. Application of idiomatic scoring

devices for orchestral instruments and voices in both large and small combinations. No degree credit for graduate composition majors.

417 Introduction to Electronic Music. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of laboratory techniques and composing for electronic instruments.

418 Electronic Music Control Systems. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: MUC 417. A study and application of analog/digital control techniques used in electronic music composition.

425, 426 Projects in Electronic Music. Semester courses; 4–12 laboratory hours. 2, 6 credits. Prerequisite: permission of instructor. Each course may be repeated for a maximum of 12 credits. Completion of selected projects in electronic module design and/or electronic music composition.

450 Composition Seminar. Semester course; 1 lecture hour. 1 credit. A forum for performance, discussion, and critical evaluation of student compositions. May be repeated for a maximum of 4 credits.

COURSES IN MUSIC EDUCATION (MUE)

Upper-division undergraduate students may also enroll in the following graduate courses with permission: MUE 597 Human Response to Music; MUE 595 Music and the Exceptional Individual. See *VCU Graduate Bulletin* for course descriptions.

290 Music in General Education. Semester course; 1 lecture and 2 laboratory hours. 2 credits. The role of music in general educational curricula with emphasis on trends in music education, philosophy, learning theories as they apply to music, concepts of curriculum and music in the educational environment. Laboratory hours will involve observations of selected school environments.

381 Methods Lab Band. Semester course; 2 laboratory hours, 1 credit. Prerequisites: class lessons in percussion, brass, woodwinds, and strings. Fundamental techniques for the prospective school band director in teaching beginning and intermediate heterogeneous groups of instrumentalists. Conducting, score reading, analysis, arranging, and classroom management will be included.

391 Processes of Music Education. Semester course; 3 lecture hours, 3 credits. Prerequisite: MUE 290. Study of current methods and materials of music in education. Orff, Dalcroze, Kodaly, Manhattanville, and other modern music education systems will be discussed, observed, and demonstrated.

392 Pedagogical and Rehearsal Techniques for Performing Organizations. Semester course; 3 lecture hours, 3 credits. Prerequisite: MUE 290. Study of the problems related to public school performance groups and the developmental stages of children. Included will be techniques for psychological and physiological pacing, selecting appropriate material, and development of musical skills pertinent to various ages.

479 Music Instrument Repair. Semester course; 2 laboratory hours, 1 credit. A study of problems related to intonation and tone quality in band and orchestra instruments; the

relationship of mouthpieces and reeds to intonation; emphasis on acquiring knowledge and skill in the care and repair of music instruments.

481–482 Music for Elementary Classroom Teachers. Continuous course; 3 lecture hours. 3–3 credits. Development of basic creative and performance competencies and the translation of these competencies into classroom activities.

483 Special Workshop in Music Education. Semester course; 15–45 laboratory hours. Variable credits.

490 Seminar in Music Education. Semester course; 1 seminar hour. 1 credit. Prerequisite: EDU 485 Supervised Teaching in Music. For music education majors, instrumental, or choral emphasis. Study of various aspects of music curriculum, pedagogy, philosophy, aesthetics, and effective methods in music education. Students will select topics of study based upon need and interest.

COURSES IN MUSIC HISTORY LITERATURE, AND THEORY (MHT)

100/200 Special Offerings in Music. Flexible term course; variable credit. 1–3 credits. Course may be repeated. Semester or short-term course designed for non-music majors which deals with a variety of subjects in music. Subject matter will change from term to term and may involve lecture and/or laboratory. See Schedule of Classes for specific offerings each semester.

105–106 Fundamentals of Music Theory. Continuous course; 3 lecture hours. 3–3 credits. At the completion of the course students will be able to harmonize melodies in triadic style, write and arrange short compositions, and notate them correctly. No degree credit for music majors.

117 Computers in Music. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Applications of digital techniques for music composition, analysis, and computer-aided instruction. The student will be expected to demonstrate competence in BASIC and FORTRAN languages as well as the ability to interface various analog to digital modules. Projects will include composition of a short work, analysis and preparation of a computer music instructional module.

121–122/221–222 Comprehensive Musicianship. Continuous courses; 4 lecture and 4 laboratory hours. 6–6 credits. A four-semester sequence during which the fundamental precepts of music history and theory, aesthetics, basic musicianship, and other pertinent elements of western music are studied. The course is designed as a comprehensive musicianship curriculum with experiences in a variety of musical phenomena as they relate through composition, performance, and analysis.

201 Acoustics. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Physical properties of sound and wave mechanics applied to the study and analysis of music and musical instruments. Topics will include instrumental and vocal sound production and perception, timbral characteristics; and pitch theory.

243, 244 Appreciation of Music. Semester courses; 3 lecture hours. 3, 3 credits. Designed to encourage intelligent listening and understanding of finer music from all periods. Not open to music majors.

245, 246/ Afro-American Studies 245, 246 Introduction to Afro-American Music. Semester courses; 3 lecture hours. 3, 3 credits. An introductory survey of black involvement with the development of music in America from 1607 to the present. Afro-American musical styles will be studied from many aspects, including their African roots and contemporary popular expression.

250, 251 Jazz Improvisation. Semester courses; 3 lecture hours. 3, 3 credits. First semester: a study of basic compositional techniques that can be used in crafting a musically effective improvised solo in the jazz medium. Second semester: advanced melodic, harmonic and rhythmic improvisational techniques as applied to contemporary jazz compositions.

302 Late Romantic Harmony. Semester course; 3 lecture hours. 3 credits. A review of common practice harmony and a study of chromatic harmony in the nineteenth and twentieth centuries.

303, 304 Piano Literature. Semester courses; 2 lecture hours. 2, 2 credits. A survey of stringed keyboard literature. Historical, formal, and stylistic considerations of the various periods and composers of keyboard music. Listening and reading assignments included.

311 Jazz Arranging I. Semester course; 3 lecture hours. 3 credits. Prerequisite: MHT 222 or permission of instructor. A study of the basic harmonic, melodic, notational, and orchestrational techniques needed to draft a successful jazz arrangement. The final project will be to write an arrangement for a 12-piece jazz ensemble.

312 Jazz Arranging II. Semester course; 3 lecture hours. 3 credits. Prerequisite: MUC 311 or permission of instructor. Advanced harmonic, melodic, and orchestrational techniques applied to writing for the small jazz ensemble, vocal group, and large jazz orchestra.

320 Music in Films. Semester course; 3 lecture hours, 3 credits. Significant film music from the 1930s to the present. The course will focus on techniques for listening and evaluation. Functional, social, technical, and aesthetic considerations of film music will be examined. Students will prepare a critical analysis of each of the films viewed in class based on their perceptions as listeners/viewers. Music reading ability not required.

334 Organ Literature. Semester course; 2 lecture hours, 2 credits. A survey of organ music.

350 Jazz Improvisation III. Semester course; 3 lecture hours, 3 credits. Techniques of thematic improvisation, stating a melody, and improvising on contemporary jazz compositions.

401 Seminar in Music History. Semester course; 2 lecture hours. 2 credits. Research and discussion of selected topics in music history and literature. May be repeated for a maximum of six credits.

407 Arranging Modern Popular Music. Semester course; 3 lecture hours. 3 credits. Adapting and scoring music for ensembles incorporating popular commercial performance styles.

411 Jazz Arranging III. Semester course; 3 lecture hours. 3 credits. Techniques of arranging for the contemporary pop medium.

412 Jazz Arranging IV. Semester course; 3 lecture hours, 3 credits. A study of the techniques used in modal, blues, and other forms of contemporary jazz composition.

413 Arranging. Semester course; 3 lecture hours. 3 credits. Practical, technical, and conceptual considerations of arranging and transcribing for vocal and instrumental groups will be explored. Students will demonstrate competence in these creative areas to the optimum level of school and/or church music organization.

421–422 Survey of Music History. Continuous course; 3 lecture hours. 3–3 credits. A study of Western music in an historical context from antiquity to the present.

434 Choral Literature. Semester course; 2 lecture hours. 2 credits. A survey of part-music for mature voices including both sacred and secular works. Primary emphasis will be on mixed-voice repertoire.

441 American Music. Semester course; 2 lecture hours. 2 credits. The growth and development of music in the United States from 1607 to the present. While the chief concentration will be upon art music and church music, folk music, jazz, and the other forms of popular expression will be included.

442 Twentieth Century Music. Semester course; 2 lecture hours. 2 credits. Impressionistic, expressionistic, neo-classic, and neoromantic influences and styles of music. Development of new sound-generating techniques and methods for ordering the new tonal materials.

451, 452, Orchestral Repertoire. Semester courses; 1 lecture hour (1 credit) or 1 lecture and 2 laboratory hours (2 credits). Performance and study of selected major symphonic works from historical, analytical, and stylistic perspective. Research reports will include comparisons of interpretations. Repertoire will consist of basic audition pieces selected by orchestras. Laboratory sessions will utilize available instrumentation for performance.

465, 466 Vocal Literature. Semester courses; 2 lecture hours, 2, 2 credits. A survey of the vocal literature of Germany, France, England, and other countries. Students will perform material.

471 Jazz History and Literature. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. A historical and analytical survey of each major jazz era. Primary focus is on the contributions and improvisational styles of the principle soloists.

481 Topics in Music. Semester course; variable credit; 1–3 credits per semester. May be repeated for a maximum of 9 credits. Flexible term courses in selected aspects of music performance, theory, literature, or history. See Schedule of Classes for specific topics to be offered each semester.

COURSES IN PAINTING AND PRINTMAKING (PAP)

155–156 Drawing and Painting, Basic. Semester course; 3 studio hours. 1–1 credit. Introduction to painting with emphasis on learning basic techniques. Discussion of materials and their use. Models—both nude and clothed are used.

203, 204 Painting and Design, Basic. Semester courses; 9 studio hours. 3, 3 credits. Painting and structure is discussed in terms of space, form, and content. Work may be carried on out-of-doors or indoors.

205-206 Painting, Basic Composition. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. First semester: an introduction to the use of paints with an emphasis on the organization of the artistic image, through the use of plastic form and color. Second semester: intensification of painting problems coupled with analysis of historical and contemporary work.

207 Painting Techniques. Semester course; 2 lecture and 6 studio hours. 4 credits. An investigation of pigments, glazes, underpainting, mixed media, materials, and other studio techniques.

209 Materials: Printmaking. Semester course; 2 lecture and 6 studio hours. 4 credits. An introduction to three principal printmaking techniques: etching, lithography, and screenprinting.

214 Printmaking, Basic. Semester course; 1 lecture and 6 studio hours. 3 credits. Fundamentals of printmaking. Introduction of basic problems of techniques and composition.

221-222 Drawing, Basic. Continuous course; 9 studio hours. 3-3 credits. Drawing instruction with attention to extension of the student's knowledge of the tools of drawing. Materials and techniques will be related to pictorial organization.

223, 224 Drawing, Basic. Semester course; 1 lecture and 6 studio hours. 3, 3 credits. Course introducing drawing fundamentals and spatial relationships. Concern is given to materials and the development of the students' visual perceptions.

255-256 Drawing and Painting, Basic. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Development of basic skills; exploring structure, color, form, and image. Students will be exposed to class critiques as a means of analyzing their creative works.

303, 304 Painting, Intermediate. Semester courses; 1 lecture and 6 studio hours. 3, 3 credits. Prerequisite: 3 credits of basic painting or permission of instructor. Primary emphasis on the development of an individual direction in the context of contemporary ideas and images in painting.

305-306 Painting, Intermediate. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Prerequisite: 3 credits of basic painting or permission of instructor. Primary emphasis on the development of an individual direction in the context of contemporary ideas and images in painting.

312 Printmaking, Intermediate (Lithography). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. Investigation of techniques and technical printing problems. Stones and plates are used.

313 Printmaking, Intermediate (Etching). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. Techniques and technical problems in the printmaking area are investigated.

314 Printmaking, Intermediate (Screenprinting). Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: basic or beginning printmaking. Investigation of techniques and technical problems in the printmaking area.

315-316 Printmaking, Intermediate (Etching). Continuous course; 2 lecture and 6 studio hours. 4-4 credits.

Prerequisite: 3 credits of basic printmaking or permission of instructor. Investigation of etching printmaking; drypoint, engraving, aquatint, soft grounds, and related techniques.

317-318 Printmaking, Intermediate (Lithography). Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. Investigation of techniques and technical printing problems in lithographic printing process from stones and plates.

319-320 Printmaking, Intermediate (Screenprinting). Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Prerequisite: 3 credits of basic printmaking or permission of instructor. An investigation of cut, hand-drawn, and photographic stencil techniques and printing on a variety of surfaces.

321-322 Drawing, Intermediate. Continuous course; 9 studio hours. 3-3 credits. Prerequisite: 3 credits of basic drawing or permission of instructor. Drawing for advanced students with special emphasis on creative response to the drawing as a work of art.

324 Drawing, Intermediate. Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of basic drawing or permission of instructor. Drawing for intermediate students with emphasis on problematic thinking and dealing with drawing as an aesthetic form.

326 Color. Semester course; 3 lecture hours. 3 credits. A course examining the concepts governing the use of color. Historical and contemporary concepts and methods of application will be explored.

329 Life Drawing. Semester course; 6 studio hours. 3 credits. Prerequisite: foundation drawing. May be repeated up to 9 credits. Explores the structural and muscular systems of the human body with emphasis upon proportional relationships, chiaroscuro, contour, volume, and foreshortening.

355-356 Drawing and Painting, Intermediate. Semester course; 9 studio hours. 3-3 credits. Prerequisite: 3 credits of basic drawing or painting or permission of instructor. Intermediate instruction in drawing and painting. Models, both nude and clothed, and still life are used.

403, 404 Painting, Advanced. Semester courses; 1 lecture and 6 studio hours. 3, 3 credits. Prerequisite: 3 credits of intermediate painting or permission of instructor. More ambitious projects with the aim of developing in the senior student a highly professional approach and achievement in his work. Individual as well as group discussions.

405-406 Painting, Advanced. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. 406 repeatable to 12 credits. Prerequisite: 3 credits of intermediate painting or permission of instructor. More ambitious projects with the aim of developing in the senior student a highly professional approach and achievement in his work. Individual as well as group discussions.

407-408 Painting, Advanced II. Continuous course; 2 lecture and 6 studio hours. 4-4 credits. Prerequisite: 3 credits of intermediate painting or permission of instructor. Advanced painting with emphasis on the direction of the individual student's creative work and his ability to solve problems.

409–410 Painting, Advanced, III. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisite: 3 credits of intermediate painting or permission of instructor. Advanced painting dealing with personal concepts developed by the student's own investigation.

412 Printmaking, Advanced (Lithography). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Specialization in one medium. Aesthetic suitability of the design to a particular medium is emphasized.

413 Printmaking, Advanced (Etching). Semester course; 9 studio hours. 3 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Concentration on one medium with emphasis on creative techniques.

414 Printmaking, Advanced (Screenprinting). Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Cut, hand-drawn, and photographic stencil techniques are explored. Printing will be done on a variety of surfaces.

415–416 Printmaking, Advanced (Etching). Continuous course; 2 lecture and 6 studio hours. 4–4 credits. 416 repeatable to 12 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Specialization in one medium with emphasis upon technical research and aesthetic suitability of the design to the particular medium used.

417–418 Printmaking, Advanced (Lithography). Continuous course; 2 lecture and 6 studio hours. 4–4 credits. 418 repeatable to 12 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Further investigation of techniques and technical printing problems in the lithographic printing process from stones and plates.

419–420 Printmaking, Advanced (Screenprinting). Continuous course; 2 lecture and 6 studio hours. 4–4 credits. 420 repeatable to 12 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Further exploration of cut, hand-drawn, and photographic stencil techniques and printing on a variety of surfaces.

421–422 Drawing, Advanced. Continuous course; 9 studio hours. 3–3 credits. 422 repeatable to 12 credits. Prerequisite: 3 credits of intermediate drawing or permission of instructor. A studio for drawing with individual criticism. Special attention is given to contemporary concepts.

423 Experimental Printmaking. Semester course; 2 lecture and 6 studio hours, 4 credits. Repeatable to 8 credits. Prerequisite: 3 credits of intermediate printmaking or permission of instructor. Relief printing, collographs, mono-prints, photoengraving, and mixed media will be investigated.

424 Drawing, Advanced. Semester course; 9 studio hours, 3 credits. Prerequisite: 3 credits of intermediate drawing or permission of instructor. A studio drawing course set up with individual criticism dealing with contemporary concepts.

448–449 Mural Painting. Continuous course; 2 lecture and 6 studio hours. 4–4 credits. Prerequisite: permission of instructor. An investigation of the concepts and procedures involved in mural painting. The class will execute at least two murals during the year.

455–456 Drawing and Painting, Advanced. Continuous course; 9 studio hours. 3–3 credits. Prerequisite: 3 credits of

intermediate drawing or painting or permission of instructor. Advanced instruction in drawing and painting. Models, both nude and clothed, and still life are used.

The following courses may be taken by undergraduates for degree credit:

525 Issues in Contemporary Visual Art

527, 528 Art and Critical Theory

COURSES IN PHOTOGRAPHY AND FILM (PTY)

233 Media Arts Survey. Semester course; 3 lecture and 3 studio hours. 4 credits. A survey of the artistic and communication uses of media in contemporary society. Cinematography, video, audio-visual communications, and microprocessor technology will be introduced.

243–244 Basic Photography. Continuous course; 1–2 lecture and 3 studio hours. 2–3 credits. Study of fundamental camera techniques and basic photographic processes in relation to visual communication. An emphasis will be placed on photography's expressive possibilities. Adjustable camera required.

245 Principles of Photography. Semester course; 3 lecture and 3 studio hours. 4 credits. A comprehensive beginning class covering an introduction to the camera, the process of exposure, developing, and black and white printmaking. The emphasis is on proper procedures in the darkroom, as well as providing an introduction to the photographic and visual concepts, critiques, and experience with shooting a variety of subjects.

301–302 Basic Photo Journalism. Continuous course; 2 lecture and 2 laboratory hours. 3–3 credits. Study of fundamentals of photography and techniques of camera use in relation to the fields of journalism and visual communications. Adjustable camera required.

325–326 The Zone System. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: PTY 243–244 or permission of instructor. Lectures deal with the testing of camera, lens, film, and printing methods to allow the student to pre-visualize images made in the camera.

341, 342 Photography Workshop. Semester courses; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisites: PTY 243–244, 245, or permission of instructor. A workshop that affords the student an opportunity to develop a personal approach to the photographic medium. Adjustable camera required.

345, 346 Intermediate Photography. Semester courses; 1 lecture and 3 studio hours, 2, 2 credits. Prerequisite: PTY 243–244. Class problems in advanced photographic techniques. Emphasis is placed on individual solutions to various photographic problems.

347 Photographic Processes and Techniques. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: PTY 245. An in-depth, and concentrated exploration of various photographic techniques. Emphasis is placed upon image creation and processing.

348 Underwater Photography. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: Valid Basic Scuba Certification Card. (Tanks, regulators, underwater camera,

and weights will be supplied.) Basic photography principles, selection and care of equipment, and how to make underwater photographs. Basic scuba equipment (mask, fins, snorkel, B.C. vest) required.

350 Photography for Visual Communications. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 245 or permission of instructor. Expanding photographic knowledge through the exploration of contemporary trends in photographic style. Technical and aesthetic emphasis is placed on developing individual solutions to visual photographic problems.

371, 372 Cinematography. Semester courses; 3 lecture and 3 studio hours, 4, 4 credits. The production of motion picture films with emphasis on fundamental shots and transitional elements. Students usually work with 16mm film and equipment.

373 16mm Camera Systems. Semester course; 2 lecture hours. 2 credits. Study of 16mm camera systems used for motion picture photography.

374 Film Pre-Production and Post-Production. Semester course; 2 lecture hours. 2 credits. An overview of techniques in planning and producing an independent film.

375 Filmmaking I. Semester course; 3 lecture and 3 studio hours. 4 credits. Techniques for production of silent films. Not open to CDE majors.

376 Filmmaking II. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 375 or PTY 233. Emphasis on technical aspects of film production.

377 The Film Image. Semester course; 3 lecture hours. 3 credits. An examination of production techniques and problems encountered by the filmmaker in creating the motion picture image. A selected number of entertainment films, documentaries, topical films, and others will be viewed as source material and will be dealt with from a production point of view.

379 View Camera Operation and Processing. Semester course; 1 lecture and 3 studio hours. 2 credits. Prerequisite: PTY 245. A course exploring and using the view camera for optimum photographic results. Emphasis is on understanding how the camera functions and learning processing techniques associated with the medium.

441, 442 Photographic Studio. Semester course; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisite: PTY 341, 342 or permission of instructor. Students will work on photographic problems relating to their areas of major interest. Options include both black and white photography and color photography.

445-446 Color Photography. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Prerequisites: PTY 345 and 346. A workshop dealing with various color processes and professional work.

475-476 Filmmaking Workshop. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Prerequisite: or permission of instructor. The production of a motion picture to be directed by faculty with the assistance of students in the various production crew roles.

481 Filmmaking III. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisite: PTY 376. Techniques for production of sound motion pictures.

482 Filmmaking IV. Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: PTY 481 and permission of instructor. Advanced projects in film production.

490-491 Motion Picture Special Effects. Continuous course; 1 lecture and 6 studio hours. 3-3 credits. Prerequisite: or permission of instructor. An exploration of special effects for film production which may be created both in the camera and with a printer.

500 Photographic Studio and Seminar. Semester course; 1 lecture and 6 studio hours. 3 credits. Prerequisite: permission of instructor. Experimentation in the studio with various processes for creating the photographic image, leading to producing a cohesive body of work. The seminar examines the technical and aesthetic components of these processes and the language and theories of photographic criticism.

COURSES IN SCULPTURE (SCU)

209, 210 Introduction to Sculpture. Semester courses; 2 lecture and 3 studio hours. 3, 3 credits. The course will offer an opportunity for students to work with some of the ideas and materials of sculpture through slides, lecture, and studio involvement.

211, 212 Sculpture. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. The primary goal of this course is the effective expression of ideas. The student is introduced to the basic tools, materials, and techniques with attention given to problem solving.

217, 218, Sculptural Concepts. Semester courses; 3 lecture and 3 studio hours. 4, 4 credits. Prerequisite: permission of instructor. A study of contemporary technology, philosophy, criticism, and their relation to material resources and technical practices.

311, 312 Sculpture. Semester courses; 3 lecture and 6 studio hours. 4, 4 credits. The emphasis in this course is on creative independence. The student is encouraged to utilize a variety of materials in order to express his ideas. May be repeated for a maximum of 8 credits.

313, 314/413, 414 Dimensional Concepts. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. An opportunity for the sculpture student to extend and expand upon traditional methods of expression and to explore new areas.

411, 412 Sculpture. Semester courses; 2 lecture and 6 studio hours. 4, 4 credits. The majority of the student's activities occur in his own studio with emphasis on the development of a personal style. May be repeated for a maximum of 16 credits.

417 Seminar in Contemporary Sculpture. Semester course; 3 lecture hours. 3 credits. A forum for consideration and discussion of recent developments. May be repeated for a total of 12 credits.

419 Professional Studio Practicum. Semester course; 9 studio hours. 3 credits. Prerequisite: permission of chairman. A studio class that provides a continuation of the student's work in sculpture. This course will be recorded as an elective for a sculpture major. May be repeated.

COURSES IN THEATRE (THE)

101-102 Voice for the Stage I. Continuous course; 2 lecture and 2 studio hours. 3-3 credits. Theory and application of

voice production, placement, and projection techniques. Open only to theatre majors upon satisfactory audition.

103 Stagecraft. Semester course; 3 lecture hours. 3 credits. The fundamental methods, materials, and techniques of set construction for the stage. Participation in departmental productions.

104 Costume Construction. Semester course; 3 lecture hours. 3 credits. The fundamental methods, materials, and techniques of costume construction for the stage. Participation in departmental productions.

105–106 Movement for Stage I. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Theory and practice in elementary movement for actors to improve muscle tone, alignment, physical sensitivity, and relaxation. Open only to theatre majors upon satisfactory audition.

107, 108 Introduction to Stage Performance. Semester courses; 3 lecture hours. 3, 3 credits. A survey and application of the basic elements in stage performing; acting, scene study, voice, and movement. For non-theatre majors.

109, 110 Orientation to Theatre. Semester courses; 1 lecture hour. 1, 1 credit. A practical introduction to theatre and a career. Exposure to the various aspects of the profession through guest lecturers, selected readings, visits to theatre organizations, and play attendance. Open only to theatre majors.

111 Introduction to Theatre. Semester course; 3 lecture hours. 3 credits. Survey of the basic elements and theories of theatrical production; directing and design with special consideration of theatre as an artistic experience.

113–114 Acting. I. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Development of personal resources; an exploration of performance skills through theatre games, role playing, improvisation, and work on basic script units. Open only to theatre majors upon satisfactory audition.

201–202 Voice for the Stage II. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Advanced study and practice in the use of the voice to include dialects, verse drama, and choral speaking. Open only to theatre majors upon satisfactory audition.

205–206 Movement for the Stage II. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Theory and practice in stage movement to develop physical control and performance skills. Open only to theatre majors upon satisfactory audition.

211–212 Introduction to Drama. Continuous course; 3 lecture hours. 3–3 credits. Analysis and critical examination of plays for methods of interpretation and production qualities.

213–214 Acting II. Continuous course; 2 lecture and 2 studio hours. 3 credits. Prerequisite: THE 113–114 or equivalent. A practical application of the psychophysical basis of acting through exploration, improvisation, scoring, and performance of scenes. Open only to theatre majors upon satisfactory audition.

221 Basic Scene Design. Semester course; 3 lecture hours. 3 credits. A study of the basic techniques used in designing space for theatre productions. Participation in departmental productions.

L221 Basic Scene Design Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

223–224 Practicum in Theatre Technology. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: THE 103, 104. Advanced problem solving in one or more areas of technical theatre.

L223, L224 Practicum in Theatre Technology Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

225 Basic Stage Electronics-Lighting. Semester course; 3 lecture hours. 3 credits. A study of the properties and basic principles of electricity as they relate to the utilization of light on the stage. Participation in departmental productions.

L225 Basic Stage Electronics-Lighting Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

227–228 Basic Stage Costuming and Makeup. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. Prerequisite: THE 104 or permission of instructor. A study of the techniques used to dress the performer, including design theory and makeup application. Participation in departmental productions.

L227, L228 Basic Stage Costuming and Make-up Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

229 Introduction to Lighting Design. Semester course; 2 lecture and 2 studio hours. 3 credits. Basic elements of lighting design, composition, orchestration, and color. Participation in departmental productions.

L229 Introduction to Lighting Design Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

251, 252/351, 352/451, 452 Rehearsal and Performance. Semester courses; hours arranged. 1 to 3 credits. Work in acting and production in a major production and one-act theatre. Each student is expected to devote a minimum of 50 hours per credit per semester to receive credit.

301–302 Voice for the Stage III. Continuous course; 2 lecture and 2 studio hours. 3–3 credits. May be repeated for a maximum of 6–6 credits. A continued study and practice in the use of the voice to include Shakespearean comedy and tragedy. Open only to theatre majors upon satisfactory audition.

303/Afro-American Studies 303 Black Theatre. Semester course; 3 lecture hours. 3 credits. A study of the major developments in the evolution of black theatre through readings and studio performances in black-related and black theatre dramaturgy.

305, 306 Scene Design. Semester courses; 1 lecture and 4 studio hours. 3, 3 credits. Prerequisite: THE 221 and permission of instructor. A study of the techniques and methods of scenic design. Participation in departmental productions.

L305, L306 Scene Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

307-308 History of the Theatre. Continuous course; 3 lecture hours. 3–3 credits. A study and analysis of theatre history: the architecture, the performer and performances, the stage, the production methods, and the audience.

309, 310 History of Costumes. Semester courses; 3 lecture hours. 3, 3 credits. Illustrated lectures on the history of costume from primitive times to the present.

311, 312 Movement for the Stage III. Semester courses; 1 lecture and 4 studio hours. 3, 3 credits. May be repeated for a maximum of 6, 6 credits. Advanced theory and practicum in stage movement concentrating upon development of character physicalization techniques, sound/motion improvisations, musical theatre styles, and choreographed abstractions. Open only to theatre majors upon satisfactory audition.

313–314 Actor's Studio I. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Prerequisite: THE 213–214 or equivalent. Alternative forms of script analysis and character study. Concentrated work on specific acting problems. Open only to theatre majors upon satisfactory audition.

315 Audition. Semester course; 4 studio hours. 2 credits. Prerequisite: THE 214 and permission of instructor. A course designed to instruct students in the various techniques of auditioning as a discrete skill; to include choice, preparation, performance, and evaluation of audition material. Open only to theatre majors.

319–320 Play Production. Continuous course; 3 lecture hours. 3–3 credits. Principles of theatre art, including scenic and costume design, technical theatre, and direction.

321, 322 Research Techniques for Costume Design. Semester course; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: permission of instructor. A seminar in research and design of costumes for the theatre, including discussion of fabrics and special construction methods used in stage costuming. Participation in departmental productions.

L321, L322 Research Techniques for Costume Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

323–324 Practicum in Advanced Theatre Technology. Continuous course; 6 studio hours. 3–3 credits. Prerequisite: permission of instructor. Advanced problem solving in technical theatre, with special emphasis on multimedia and new design materials.

L323, L324 Practicum in Advanced Theatre Technology. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

325 Stage Management. Semester course; 2 lecture and 2 studio hours. 3 credits. Prerequisite: permission of instructor. The fundamental responsibilities and techniques of professional stage management.

326 Basic Stage Electronics-Sound. Semester course; 3 lecture hours. 3 credits. A study of the basic techniques used

to create sound for theatre productions. Participation in departmental productions.

L326 Basic Stage Electronics-Sound Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

327 Technical Drawing. Semester course; 3 lecture hours. 3 credits. Prerequisites: THE 221 and permission of instructor. A practical approach to drafting for the theatre, preparation and presentation, including perspective, rotation, development, and graphic solutions pertaining to theatrical construction problems. Open to theatre majors only.

330, 331/430, 431 Production. Semester courses; 1 or 2 lecture and 4 or 8 laboratory hours. 3 or 6 credits per semester. The design, rehearsal, and performance of dramatic works. Open only to theatre majors.

335, 336/435, 436 Colloquium and Practical Training. Semester courses; 1 or 2 lecture and 4 or 8 laboratory hours. 3 or 6 credits per semester. Literary, historical, and theoretical studies together with specialized voice and movement training related to dramatic works in production. Open only to theatre majors.

340, 341/440, 441 Theatre Projects. Semester courses; 1 or 2 lecture and 4 or 8 laboratory hours. 3 or 6 credits per semester. Individual or group projects in acting, directing, costume design, stage design, or dramaturgy. Open only to theater majors.

361–362 Directing. Continuous course; 3 lecture hours. 3–3 credits. Lectures and discussions on the theories of stage direction; problems involved in the production of period plays and a study of modern theories. Open only to theatre majors.

403, 404 History of Dramatic Literature. Semester courses; 3 lecture hours. 3, 3 credits. Study and analysis of dramatic literature. First semester: Aeschylus through Shakespeare. Second semester: Corneille to Ibsen.

407 Advanced Scenic Technique. Semester course; 1 lecture and 4 studio hours. 3 credits. Prerequisite: THE 221 or permission of instructor. An intensive involvement in contemporary theory and practice of scenic techniques. Participation in departmental productions.

L407 Advanced Scenic Technique Laboratory. Semester course; 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical courses.

413–414 Actor's Studio II. Continuous course; 1 lecture and 4 studio hours. 3–3 credits. Prerequisite: THE 313–314 or equivalent. Advanced character and script analysis. Concentrated work on personal performance limitations and acting problems of each student.

417, 418 Children's Theatre. Semester courses; 9 laboratory hours. 3, 3 credits. A practicum in children's theatre. Students will be required to work in one or more of the following areas: performance, directing, design, technical theatre, and management. The courses will include mounting and touring of children's theatre productions.

419 Professional Studio Practicum. Semester course; 9 studio hours. 3 credits. Prerequisite: permission of instructor. A studio class that provides a continuation of the stu-

dent's work in sculpture. This course will be recorded as an elective or a sculpture major. May be repeated.

421, 422 Advanced Costume Design. Semester courses; 2 lecture and 2 studio hours. 3, 3 credits. Prerequisite: THE 321-322 or permission of instructor. An advanced study of the techniques, methods, and problems of costume design for the student who plans to enter the field professionally.

L421, L422 Advanced Costume Design Laboratory. Semester courses; 2 studio hours. 1, 1 credit. The practical application in production of the ideas, principles, and theories, discussed in design/technical courses.

423, 424 Modern Drama. Semester courses; 3 lecture hours. 3, 3 credits. Intensive study of major continental and American plays.

426, 427/English 426, 427 Playwriting. Semester courses; 3 lecture hours. 3, 3 credits. A practical introduction to the creation of original play scripts for theatre, television, and motion pictures. Readings and studio performances of works in progress and completed scripts.

429 Advanced Lighting Design. Semester course; 2 lecture and 2 studio hours. 3 credits. A study of light as a method of creating mood within stage settings. Participation in departmental productions.

L429 Advanced Lighting Design Laboratory. Semester course; 2 lecture and 2 studio hours. 1 credit. The practical application in production of the ideas, principles, and theories discussed in design/technical course.

461, 462 Advanced Directing. Semester courses; 3 lecture hours. 3, 3 credits. Prerequisite: THE 361-362. Further study in direction techniques, especially the problems of the full-length play.

490 Senior Seminar. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Research and/or creative project in the drama major's area of special interest pursuant to graduate study or professional work in the student's chosen field.

491 Topics in Theatre. Semester course; variable credit. 1-3 credits per semester; May be repeated for a maximum of 9 credits. Flexible term course in selected aspects of performance, theory, literature, or history. See Schedule of Classes for specific topics to be offered each semester.

493, 494 Professional Internship. Semester courses; 3-9 credits. A practicum in theatre conducted in cooperation with selected professional or semi-professional theatre organizations.

With permission of instructor, the following courses may be taken by undergraduates for degree credit:

505-506 Stage Design

508 Scene Painting

513-514 Acting Styles

519 Instructional Methods in Theatre and Speech

525 Theatre Administration

596 Practicum in Creative Dramatics

COURSES IN SPEECH (SPE)

103 Voice and Diction. Semester course; 1 lecture hour. 1 credit. Principles and techniques of effective production of the speaking voice and articulation of the sounds of American English.

121 Effective Speech. Semester course; 3 lecture hours. 3 credits. Structured speaking and critical listening experiences within the basic forms of speech communication: interpersonal, small group, and public.

301 Beginning Oral Interpretation. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. The basic techniques of oral interpretation will be introduced. Performance will include the reading of prose, poetry, and dramatic literature.

321 Speech for Business and the Professions. Semester course; 3 lecture hours. 3 credits. Theory and practice in the oral communication process. Organization and presentation of informative and persuasive subject matter in simulated professional contexts related to the student's major area of interest.

401-402 Oral Interpretation of Literature. Continuous course; 3 lecture hours. 3-3 credits. Theory and practice in the analysis and oral presentation of prose, poetry, and dramatic literature.

408 Speech for Teachers. Semester course; 3 lecture hours. 3 credits. Principles and practice for the prospective or in-service teacher in the oral communication process as it relates to expression both within and outside the classroom. Emphasis on the role of the teacher as listener. Voice and articulation exercises.

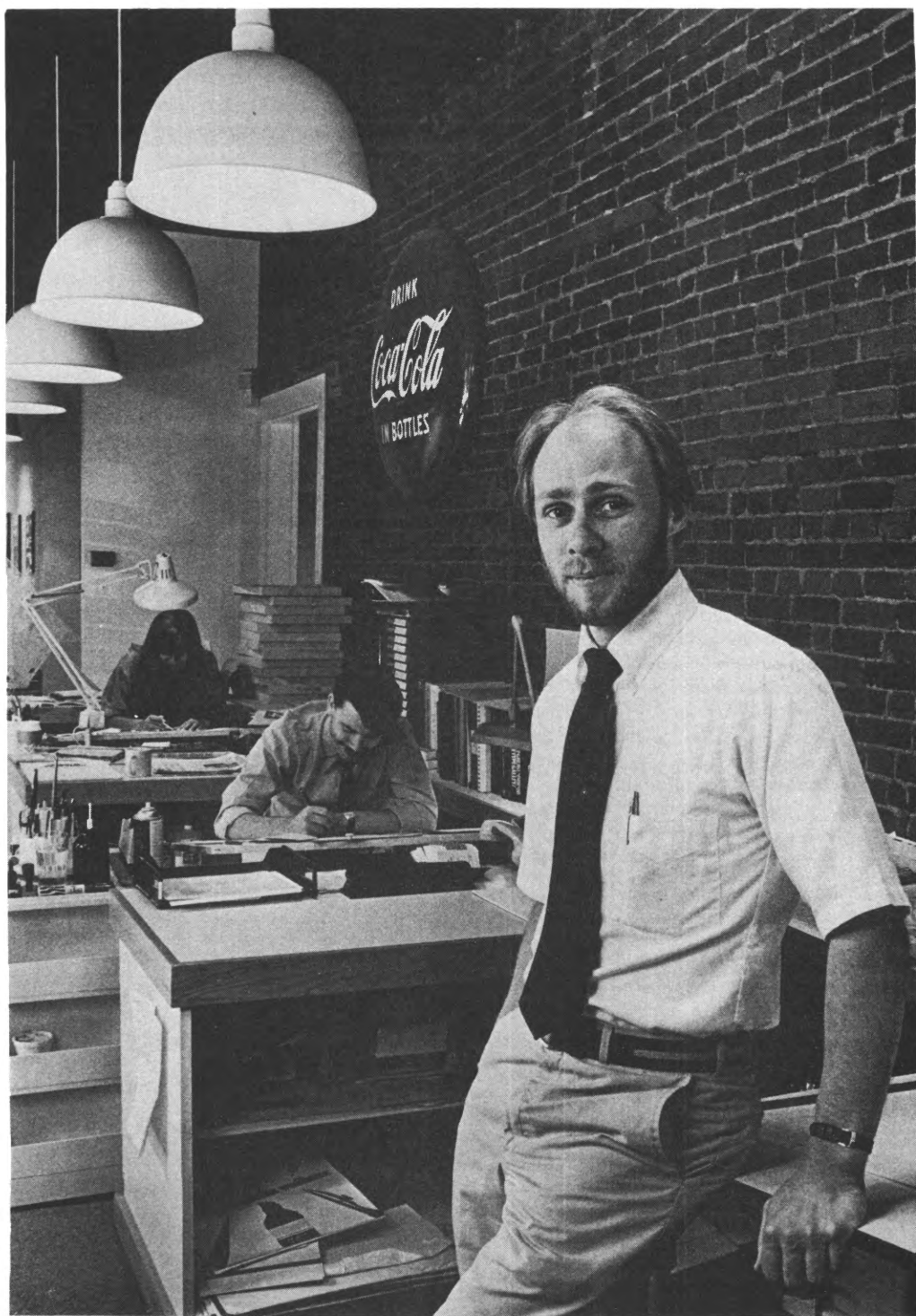


The School of Basic Health Sciences offers M.S. and Ph.D. degrees in the departments of anatomy, biochemistry, biostatistics, human genetics, microbiology and immunology, pharmacology and toxicology, physiology and biophysics, and pathology and an M.S. degree in the department of biomedical engineering.

PART IX — School of Basic Health Sciences

The School of Basic Health Sciences is one of the six schools located on the Medical College of Virginia Campus and consists of the Departments of Anatomy, Biochemistry and Molecular Biophysics, Biostatistics, Human Genetics, Microbiology and Immunology, Pharmacology and Toxicology, Physiology, and the Program in Biomedical Engineering. All departments provide instruction in their disciplines for first professional, graduate, and undergraduate students

in the other health sciences schools. The School of Basic Health Sciences maintains strong research programs in the biomedical sciences and offers only programs leading to the Master of Science or Doctor of Philosophy degrees. Detailed information on these programs may be found in the Virginia Commonwealth University *Graduate Bulletin* and *Medical College of Virginia Bulletin*.



Because VCU is located in the heart of the region's largest commercial and industrial area, School of Business students have many opportunities to relate what they learn in the classroom to activity in the business world.

PART X—School of Business

J. CURTIS HALL

Dean

MOUSTAFA H. ABDELSAMAD

Associate Dean for Graduate Studies

GLENN H. GILBREATH

Associate Dean for Undergraduate Studies

JOHN D. LAMBERT

Associate Dean for Administration

DENNIS M. O'TOOLE

Associate Dean for External Affairs

The primary objective of the School of Business is to prepare students for professional careers in business, government, research, and education. The general requirements for all students in the school are designed to provide a broad knowledge of life in general and of business in particular. The major requirements provide opportunity for extensive study in specific fields.

Within the primary objective, the School of Business has these goals:

1. To render service to the business community
2. To engage in and encourage research in business-related fields
3. To provide service to other schools in the university
4. To contribute to the identification and solution of problems related to the urban mission of the university

The School of Business offers degree programs in accounting, business administration and management, economics, information systems, marketing, and office automation man-

agement. A business teaching option is offered, in cooperation with the School of Education, within the office automation management major.

ACCREDITATION

The School of Business is accredited by the American Assembly of Collegiate Schools of Business. The AACSB accredits programs of professional education for business at the collegiate level. Its standards include an evaluation of curriculum, faculty credentials, library facilities, physical plant and equipment, and financial support of the institution.

SCHOLARSHIPS AND AWARDS

A number of scholarships are awarded annually to students enrolled in the School of Business. These include the Howard D. Goldman Scholarship, Insurance Women of Richmond Scholarship, Davis Ratcliffe Insurance Award, John A. Levering Memorial Scholarship, Mid-Atlantic Coca-Cola Bottling Company Scholarships, J. Sydnor Mitchell Award, Richmond Chapter of the Institute of Real Estate Management Scholarship, Risk and Insurance Managers Society Annual Award, State Fair of Virginia Scholarships, and the Charles G. Thalhimer Family Scholarships. In addition to university scholarships, students are eligible to apply and compete for a number of other scholarships awarded to students in various School of Business programs.

Several nonmonetary awards are given in recognition of scholastic achievement and service. These include the Delta Sigma Pi Scholarship Key, Outstanding Economics Senior Award, Virginia Society of Certified Public Accountants Award of Achievement, and the Wall Street Journal Award.

HONORARY AND PROFESSIONAL ORGANIZATIONS

The school seeks to improve the quality of its programs and provide educational development opportunities for its students through honorary and professional organizations.

Beta Gamma Sigma, the national scholarship society founded in 1913 to encourage and reward scholarship and accomplishment among students in business, has an active chapter at VCU. Eligibility for election is restricted to the upper five percent of the junior class and the upper ten percent of the senior class.

Beta Alpha Psi is a national accounting honorary society that elects its members on the basis of scholarship achievement in accountancy courses. Omicron Delta Epsilon is a national honorary society that recognizes scholarship in economics. Alpha Mu Alpha is the national honor society in marketing.

Students are encouraged also to participate in the student professional organizations which include Delta Sigma Pi, an international business fraternity; Rho Epsilon, a national fraternity for students interested in real estate; the American Marketing Association; the Society for Advancement of Management; the American Society of Personnel Administrators; and the Data Processing Management Association.

COOPERATIVE EDUCATION AND INTERNSHIPS

Students enrolled in the School of Business are eligible to participate in the University Cooperative Education Program. Qualified students who are placed with an employer will either alternate several semesters of full-time study with several semesters of work experience or combine study with part-time work experience during the same semester. The School of Business also offers internships in several majors that allow advanced students to pursue part-time work assignments with area employers for one or more semesters.

ADVISORY BOARD

The School of Business Advisory Board is composed of leading business executives. The board meets twice a year to advise and assist the dean and faculty in the development of the total educational program and help in the school's continuing efforts to maintain excellence in the education of the students.

ACADEMIC POLICIES

Programs of study leading to a baccalaureate degree in the School of Business are organized into two components, the foundation program and the advanced program. Students admitted to the School of Business as freshmen and sophomores enroll in the foundation program. Continuing students who meet the required academic standards are admitted to a major field at the beginning of the student's junior year. Transfer applicants may also be considered for admission to the foundation and advanced programs.

The selection of applicants for acceptance to a major is competitive and based on academic performance. In order to maintain the quality of its educational programs, the number of students admitted in any semester depends on the resources available to the school. All students admitted to a major must have completed, prior to enrollment in the advanced program, a minimum of 54 credits in the foundation program (outlined below) or the equivalent. The 54 credits completed must include the following courses or their equivalents: ENG 101-102, BUS 111-112, ECO 201-202, BUS 203-204, and BUS 260.

Applications and information for admission to all undergraduate programs in the School of Business may be obtained from University Enrollment Services, Virginia Commonwealth University, 821 West Franklin Street, Box 2526, Richmond, VA 23284-0001.

ADMISSION DEADLINES

Freshman applicants to the School of Business should follow the application submission dates for the university stated in part II of this bulletin. Applicants for readmission and transfer applicants should submit applications by July 1 for fall enrollment and by November 15 for spring enrollment.

Students currently enrolled in degree programs at VCU who wish to request a change of major to any School of Business program must file the request prior to the end of the eighth week

of classes during the fall and spring semesters. The deadline to request a change of major during the summer sessions is July 1. The change, if approved, becomes effective at the beginning of the following semester.

Students completing the business foundation program must apply for admission to the advanced program by requesting a change of major. The request must be filed according to the above dates during the semester before they wish to enroll in advanced program courses.

ENROLLMENT IN BUSINESS COURSES

The School of Business attempts to provide space in classes for all eligible students who desire to enroll in business courses. When the space available in courses offered by the School of Business is insufficient to meet demand, students enrolled in School of Business programs will receive priority for enrollment in these courses.¹ When sufficient space is available, all students attending the university are eligible for enrollment in freshman and sophomore courses offered by the School of Business (all 100–200 level courses with BUS and ECO prefixes), provided that appropriate course prerequisites are met. Eligibility for enrollment in upper division courses (BUS and ECO 300–400 level) is restricted to students admitted to a major field within the university and special students who have completed a baccalaureate degree. Students without these qualifications may enroll in only the following upper division courses, provided any course prerequisites are met:

- BUS 301 Business Statistics
- BUS 305 Tax Planning for Individuals
- BUS 315 Personal Finance
- BUS 316 Principles of Real Estate
- BUS 317 Real Property Management
- BUS 326 Real Estate Law
- BUS 333 Risk and Insurance
- BUS 341 Advanced Shorthand and Transcription
- BUS 345 Advanced Typewriting
- BUS 349 Office Procedures
- BUS 421 Small Business Management
- BUS 423 Real Estate Brokerage
- BUS 425 Real Estate Appraisal
- BUS 428 Employee Benefit Planning
- BUS 429 Real Estate Finance
- BUS 431 Advanced Real Estate Appraisal
- BUS 443–444 Word Processing Concepts and Procedures
- BUS 448–449 Professional Secretarial Training

LIMITATION ON TOTAL CREDITS EARNED BY NONBUSINESS MAJORS

The number of credits that nonbusiness majors may accumulate from enrollment in classes

offered by the School of Business is limited to a maximum of 25 percent of the total credits required for graduation in the nonbusiness program. Students who desire to take more than 25 percent of their course work in business (BUS) and economics (ECO) courses must be admitted to a major in the School of Business and must meet all graduation requirements of the School of Business.¹

TRANSFER POLICIES

In addition to the general requirements of the university and the School of Business, the following regulations apply to students who transfer from other institutions to enroll in an undergraduate program in the School of Business.

1. Transfer of business and economics courses from two-year institutions shall be limited to such courses that the School of Business offers at the lower division (freshman and sophomore years).
2. Transfer of business and economics courses from baccalaureate degree-granting institutions shall be limited to courses offered at levels no lower than the levels of comparable courses offered in the School of Business.

STUDENT ADVISING

Each student admitted to a major is assigned a faculty advisor in the major field of study. Students enrolled in the foundation program are assigned advisors to assist them until the foundation program has been completed. The faculty advisor assists students in planning course work, becoming familiar with university services, interpreting university rules and procedures, and clarifying career objectives.

While the faculty of the School of Business will endeavor to provide timely and accurate advice, *the student has the responsibility to know and to satisfy the degree requirements of his/her academic program.* Each student should become familiar with the curriculum requirements on the following pages, the appropriate sequencing of courses and course prerequisites, and the academic regulations covered in Part V of this bulletin.

¹This does not reduce the priority for enrollment or limit the number of courses in economics for economics majors enrolled in the College of Humanities and Sciences.

GENERAL REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN BUSINESS

A minimum of 126 credits, no more than four of which may be in physical education (activity courses), is required. The foundation program specifies the course requirements during the freshman and sophomore years of study for students interested in pursuing a baccalaureate degree in the School of Business. Students who successfully complete a minimum of 54 credits in the foundation program, including ENG 101–102, ECO 201–202, BUS 111–112, BUS 203–204, and BUS 260, will have completed the course requirements for admission to a major in the School of Business. The advanced program outlines the course requirements for students admitted to a major in the School of Business. Candidates for the Bachelor of Science degree in the School of Business must complete the 126 credits outlined in the combination of the foundation and advanced programs.

FOUNDATION PROGRAM²

	<i>Credits</i>
1. General Requirements (51 credits)	
ENG 101–102 Composition and Rhetoric.....	6
ECO 201–202 Principles of Economics.....	6
BUS 111–112 or MAT 111–112 Mathematics....	6
SPE 121 Effective Speech or 321 Speech for Business and the Professions (only one may be used toward degree requirements).....	3
Restricted Electives	
a. Natural Science.....	6
One of the following six credits:	
BIO 101–102 General Biology,	
CHE 101–102 General Chemistry,*	
CHE 103–104 Introduction to Modern Chemistry,	
PHY 101 Foundation of Physics and PHY 102 Frontiers of Physics,	
PHY 103 Elementary Astronomy and PHY 105 Physical Geology, or	
PHY 201–202 General Physics.	
A recommended laboratory (1 credit) is optional in all courses except	
PHY 201–202 (required) and	
PHY 105 (no lab).	
*8 credits	
b. Human Behavior.....	6
Any combination of six credits in Psychology, Sociology, and Anthropology (excluding PSY 214 Application of Statistics and SOC 214 Application of Statistics, which may not be taken for degree credit by School of Business majors).	

c. Institutional Studies ³	6
One of the following six credits:	
POS 101, 102 American Government;	
HIS 101, 102 Introduction to European History;	
HIS 103, 104 Introduction to American History;	
or any six credits from:	
POS 201 Introduction to Politics;	
POS 202 Comparative Politics; and	
POS 203 Issues in World Politics.	
d. Literature or Language.....	6
Any combination of six credits from:	
ENG 201, 202 Western World Literature;	
ENG 203, 204 English Literature;	
ENG 205, 206 American Literature;	
ENG 241 Introduction to Shakespeare; and	
PHI 103, 104 Introduction to the History of Western Philosophy	
OR	
Any two-course sequence (6–8 credits) in one foreign language.	
Non-School of Business Electives.....	6
2. School of Business Core (9 credits)	
BUS 203–204 Introduction to Accounting.....	6
BUS 260 Information Systems Concepts.....	3
Total	60

ADVANCED PROGRAM

1. School of Business Core (27 credits)	
BUS 201 Business Statistics	3
BUS 308 Introduction to Marketing.....	3
BUS 311 Financial Management.....	3
BUS 319 Organizational Behavior.....	3
BUS 320 Production/Operations Management....	3
*BUS 323 Legal Environment of Business.....	3
BUS 325 Business Communications.....	3
BUS 434 Business Policy.....	3
ECO 303 Managerial Economics.....	3
2. Major Requirements (27 credits)—Listed under the major requirements section of each department...	27
3. Electives (business or nonbusiness).....	12
Total	66

ACCOUNTING

JOHN B. SPERRY

Chairman of the Department

William P. Brown	Floyd W. Carpenter
Novella N. Clevenger	Thomas B. Clevenger
Edward N. Coffman	Alan B. Deck
Clarence L. Dunn	Wayne L. Edmunds
John O. Everett	Donald W. Hicks
Charles L. Holley	Raymond T. Holmes, Jr.
Rita P. Hull	Timon V. Kay
Cheryl E. Mitchem	Philip H. Olds
Edward C. Spede	Rasoul H. Tondkar
Jackie G. Williams	H. David Willis

² Students in the business teaching option must follow the foundation and advanced programs outlined in the listing for the Department of Office Automation Management.

³ Students intending to major in accounting must take Political Science.

⁴ Accounting majors are required to take BUS 481 instead of BUS 323.

The accounting program is designed to prepare students for careers as professional accountants in public practice, industry, and government. Students are encouraged to sit for a professional examination in their final semester and the program is designed to support this recommendation.

Major Requirements

	<i>Credits</i>
BUS 303–304 Intermediate Accounting I and II	6
BUS 306 Cost Accounting	3
BUS 307 Accounting Systems	3
BUS 404 Advanced Accounting	3
BUS 405 Tax Accounting	3
BUS 406 Auditing	3
BUS 407 Auditing Methods OR	
BUS 410 Advanced Tax Accounting	3
BUS 411 Accounting Opinions and Standards	3
Total	27

Recommended Electives

- BUS 302 Business Statistics
- BUS 339 Management Science
- BUS 407 Auditing Methods OR
- BUS 410 Advanced Tax Accounting
- BUS 482 Law for Accountants II

POST-BACCALAUREATE CERTIFICATE IN ACCOUNTING

The post-baccalaureate certificate in accounting is designed for the student who holds a bachelor's degree in a field other than accounting and who desires to continue his education beyond the undergraduate level but does not aspire to a master's degree. Candidates for the certificate are required to complete a total of 45 hours including the courses presented below, or other equivalents, and meet other academic standards. For information relating to the certificate program, contact the Associate Dean for Graduate Studies, School of Business, Box 4000, 1015 Floyd Avenue, Richmond, VA 23284-0001.

Requirements

	<i>Credits</i>
BUS 205 ³ Introductory Accounting Survey	3
BUS 303–304 Intermediate Accounting I and II	6
BUS 306 Cost Accounting	3
BUS 307 Accounting Systems	3
BUS 404 Advanced Accounting	3
BUS 405 Tax Accounting	3

³BUS 203–204 may be taken in lieu of BUS 205. Up to 15 credit hours of the nonaccounting courses may be waived if equivalent courses have been completed. All transfer credits and waiver of courses must be approved by the Department of Accounting and the associate dean for graduate studies in business.

BUS 406 Auditing	3
BUS 407 Auditing Methods OR	
BUS 410 Advanced Tax Accounting	3
BUS 411 Accounting Opinions and Standards	3
Total	30

BUS 260 Information Systems Concepts	3
BUS 301 Business Statistics	3
BUS 339 Management Science	3
BUS 481-482 Law for Accountants I and II	6
Total	15
Total	45

BUSINESS ADMINISTRATION AND MANAGEMENT

WALTER S. GRIGGS, JR.

Chairman of the Department

Moustafa H. Abdelsamad	Robert L. Andrews
Eugene Bartolich	Sam G. Berry
James H. Boykin	Darrel R. Brown
Donna G. Byrd	George C. Canavos
Richard J. Coppins	Kay M. Creasman
William H. Daughtrey, Jr.	Guy J. DeGenaro
Jerry T. Ferguson	Marilyn B. Fisher
Glenn H. Gilbreath	George R. Gray
Seong C. Gweon	Frederick C. Haas
Elbert Hubbard	L. Wade Humphreys
Neil J. Humphreys	Eugene H. Hunt
Russell A. Johnston	Wallace R. Johnston
Ibrahim S. Kurtulus	Kim Melton
Don M. Miller	Elbert G. Miller, Jr.
Donald W. Myers	Phyllis S. Myers
Subhash C. Narula	David W. Pentico
Michael W. Pitts	Carol D. Rasic
George W. Rimler	Ann M. Robertson
Tai S. Shin	Randall G. Sleeth
Alfred L. Smith, Jr.	Charles H. Smith
Michael A. Spinelli	I. Jeffrey Turshen
Paul M. Umberger	C. Lankford Walker
D. Robley Wood	

The major in business administration and management offers students a choice of three options: business administration; finance, insurance, and real estate; and management. The finance, insurance, and real estate option and the management option each have three tracks that allow additional specialization in an area of interest. The business administration option is designed to provide a broad education in business by allowing students to complete courses in several different subject areas.

Major Requirements

Students must select one of the three following options and complete the 27 credits required in that option. All students must declare the selection of their option with the chairman of

the department no later than the beginning of the junior year.

1. Business Administration Option

This option allows students to obtain a broad education in business by combining a list of core courses with selected courses from several different areas of study.

A. Option Core (15 hours)	<i>Credits</i>
BUS 302 Business Statistics	3
BUS 331 Personnel Management	3
BUS 339 Management Science	3
BUS 340 Operations Management	3
BUS 489 Management Seminar	3
B. Select four courses from the following six areas; at least one course must be taken in each of three different areas (12 hours)	<u>12</u>
Total	27

Finance

BUS 415 Investments	
BUS 417 Cases in Financial Management	
BUS 437 Funds Management for Financial Institutions	

Insurance/Financial Security

BUS 333 Risk and Insurance	
BUS 424 Property and Liability Insurance	
BUS 426 Life and Health Insurance	
BUS 428 Employee Benefit Planning	
BUS 430 Social Insurance	
BUS 432 Insurance Law	

Owner/Manager Business

BUS 421 Small Business Management	
BUS 436 Case Analysis of the Small Firm	

Personnel/Industrial Relations

BUS 420 Seminar in Industrial Relations	
BUS 427 Labor Law and Legislation	
BUS 433 Compensation Management	
BUS 435 Seminar in Personnel Management	

Production/Operations Management

BUS 440 Forecasting Methods and Process	
BUS 441 Production Planning and Control Systems	
BUS 491 Topics in Business (approved topic)	

Real Estate and Urban Land Development

BUS 316 Principles of Real Estate	
BUS 317 Real Property Management	
BUS 326 Real Estate Law	
BUS 423 Real Estate Brokerage	
BUS 425 Real Estate Appraisal	
BUS 429 Real Estate Finance	
BUS 431 Advanced Real Estate Appraisal	

2. Finance, Insurance, and Real Estate Option

This option allows students interested in either finance, insurance, or real estate to combine a core of general business courses with a track of four courses in one of these three areas of study.

A. Option Core (15 hours)	<i>Credits</i>
BUS 331 Personnel Management, OR	
BUS 489 Management Seminar	3

BUS 340 Operations Management, OR	
BUS 339 Management Science	3
BUS 303 Intermediate Accounting I OR	
BUS 306 Cost Accounting OR	
BUS 333 Risk and Insurance OR	
BUS 429 Real Estate Finance	3
ECO 307 Money and Banking	3
BUS 302 Business Statistics	3
B. Select one of the three tracks (12 hours)	<u>12</u>
Total	27

Finance Track

BUS 415 Investments	3
BUS 417 Cases in Financial Management	3
BUS 437 Funds Management in Financial Institutions	3
Approved Finance elective	<u>3</u>
	12

Insurance/Financial Security Track

BUS 424 Property and Liability Insurance	3
BUS 426 Life and Health Insurance	3
BUS 428 Employee Benefit Planning	3
BUS 430 Social Insurance OR	
BUS 432 Insurance Law	<u>3</u>
	12

Real Estate and Urban Land Development Track

BUS 316 Principles of Real Estate	3
BUS 326 Real Estate Law	3
BUS 425 Real Estate Appraisal	3
BUS 429 Real Estate Finance OR	
BUS 431 Advanced Real Estate Appraisal	<u>3</u>
	12

3. Management Option

This option allows students interested in management to combine a list of core courses with a track of four courses in one of three areas of study in management.

A. Option Core (15 hours)	
BUS 302 Business Statistics	3
BUS 331 Personnel Management	3
BUS 340 Operations Management	3
BUS 339 Management Science	3
BUS 489 Management Seminar	3
B. Select one of the three tracks (12 hours)	<u>12</u>
Total	27

Owner/Manager Business Track

BUS 306 Cost Accounting	3
BUS 421 Small Business Management	3
BUS 436 Case Analysis of the Small Firm	3
Approved Owner/Manager Business Elective	<u>3</u>
	12

Personnel/Industrial Relations Track

BUS 420 Seminar in Industrial Relations	3
BUS 427 Labor Law and Legislation	3
BUS 433 Compensation Management	3
BUS 435 Seminar in Personnel Management	<u>3</u>
	12

<i>Production/Operations Management Track</i>	
BUS 306 Cost Accounting.....	3
BUS 440 Forecasting Methods and Process	3
BUS 441 Production Planning and Control Systems	3
Approved Production/Operations Management elective	3
	12

Approved Electives for the Finance Track

BUS 303 Intermediate Accounting I	
BUS 304 Intermediate Accounting II	
BUS 306 Cost Accounting	
BUS 405 Tax Accounting	
BUS 424 Property and Liability Insurance	
BUS 426 Life and Health Insurance	
BUS 428 Employee Benefit Planning	
BUS 429 Real Estate Finance	
ECO 301 Microeconomic Theory	
ECO 302 Macroeconomic Theory	
ECO 305 Public Finance—State and Local	
ECO 306 Public Finance—Federal	
ECO 329 International Economics	
ECO 401 Introduction to Econometrics	
ECO 402 Business Cycles and Forecasting	
ECO 403 Introduction to Mathematical Economics	

Approved Electives for the Production/Operations Management Track

BUS 361 Systems Analysis
BUS 379 Logistics and Physical Distribution
BUS 491 Topics in Business (approved topic)
AJP 415 Industrial Safety Engineering
CSC 231 FORTRAN Programming
PSY 310 Industrial Psychology
PSY 430 Engineering Psychology

Approved Electives for the Owner/Manager Business Track

BUS 324 Legal Aspects of the Management Process
BUS 333 Risk and Insurance
BUS 371 Elements in Advertising Strategy
BUS 372 Pricing and Product Strategy
BUS 373 Consumer Behavior
BUS 376 Dynamics of Retail Management

ECONOMICS

GEORGE E. HOFFER

Chairman of the Department

Larry G. Beall	John H. Bowman
Thomas C. Campbell	Amy H. Dalton
Susan F. Feiner	Charles J. Gallagher
William B. Harrison III	John G. Marcis
Edward L. Millner	Max Moszer
Dennis M. O'Toole	Michael D. Pratt
Robert J. Reilly	Abdelaleem M. Sharshar
Eleanor C. Snellings	David Sykes
James N. Wetzel	Jang H. Yoo

The program leading to the B.S. degree in economics offers an introduction to the fundamentals of business and economics, with a concentration in the third and fourth years on

methods of economic analysis. The curriculum prepares students for positions in business and government and for graduate study. The department also offers courses in economics to meet the needs of students in other curricula offered by the university.

A program leading to the B.S. in economics is also offered in the College of Humanities and Sciences for those students who prefer a liberal arts core curriculum.

Major Requirements

	<i>Credits</i>
ECO 301 Microeconomic Theory	3
ECO 302 Macroeconomic Theory	3
ECO 307 Money and Banking	3
ECO 489 Senior Seminar in Economics	3
ECO Electives	12
BUS 302 Business Statistics	3
Total	27

Minor in Economics

A minor in economics is offered. The requirements for the minor are listed in Part VI of this bulletin.

INFORMATION SYSTEMS

A. JAMES WYNNE

Chairman of the Department

David A. Ameen	Edwin E. Blanks
James P. Clements	Gaye C. Dawson
Robert W. Duvall	F. Paul Fuhs
Robert L. Gray, Jr.	William T. Harding
Bartow Hodge	Omar E. Khalil
Jacqueline F. Leavitt	Josephine F. Morecroft
Richard T. Redmond	J. William Riehl
Jean G. Romaniuk	Lanny J. Ryan
Gerald A. Saunders	John W. Sutherland
Heinz R. Weistroffer	Howard B. Wilson

The program leading to the Bachelor of Science degree in information systems is designed to prepare students for professional careers in data processing. Through required and elective courses, students will be prepared for positions of programmer, systems analyst, or software analyst. The department also offers courses in information systems to meet the needs of students in other curricula offered by the university.

Major Requirements

	<i>Credits</i>
BUS 361 Systems Analysis	3
BUS 362 Computer Hardware and Software Operations	3
BUS 363 COBOL Programming	3
BUS 364 Applications Programming	3

BUS 365 Systems Design	3
BUS 464 Data Base Systems	3
BUS 465 Advanced Program Design Techniques	3
Two electives from the following group	6
BUS 366 Computerware Analysis	
BUS 460 Assembler Programming	
BUS 461 System Project Planning	
BUS 462 Control Programming	
BUS 463 Selected Programming Languages	
BUS 467 Distributed Data Processing and Telecommunications	
BUS 468 Direction and Coordination of Information Systems Organizations	
BUS 469 Information and Decision Systems in Organizations	
BUS 493 Internship in Information Systems	

Totals

27

POST-BACCALAUREATE CERTIFICATE IN INFORMATION SYSTEMS

The post-baccalaureate certificate in information systems is designed for students who hold bachelor's degrees in fields other than information systems and who desire to continue their education beyond the undergraduate level but do not aspire to a master's degree. Candidates for the certificate are required to complete a total of 30 hours including the courses listed below, or their equivalents, with a minimum of 24 credit hours of study in information systems to be taken at Virginia Commonwealth University. The required courses include: BUS 260, 361, 362, 363, 364, 365, 464, and 465 plus six hours of approved electives.

Students acquiring the skills provided in the program should be well received in terms of employment within the business community and with government agencies. Depending upon the particular mix of courses and chosen electives, students should be well prepared to sit for the Certificate in Data Processing and the Registered Professional Programmer Examinations given under the auspices of the Data Processing Management Association.

Applicants to the program should seek information from the Associate Dean for Graduate Studies, School of Business, 1015 Floyd Avenue, Box 4000, Richmond, VA 23284-0001.

MARKETING

HEIKO de B. WIJNHOLDS

Chairman of the Department

Clifford J. Elliott

Michael W. Little

Dennis R. McDermott

Bobby R. Ferguson

Kenneth E. Maricle

Donald F. Mulvihill

Thomas A. Myers
Thomas W. Thompson

Patrick A. Rush

The major in marketing is designed to give the student a broad working knowledge of contemporary marketing philosophy and practice. Students working closely with their advisors will be able to choose from a number of available marketing courses those that most closely meet their interests and career aspirations. Graduates of this program will find career opportunities in such fields as marketing management, advertising, sales, marketing research, public relations, retailing, and management of non-business organizations.

Major Requirements

	<i>Credits</i>
BUS 309 Marketing in the Changing World	3
BUS 310 Introduction to Marketing Research	3
BUS 476 Marketing Management	3
Marketing Electives	18
Total	27

OFFICE AUTOMATION MANAGEMENT

J. HOWARD JACKSON

Chairman of the Department

R. Jon Ackley

Iris W. Johnson

Marietta Spring

Barbara S. Hall

C. Glenn Pearce

Woodie L. Tucker

The major in office automation management is designed for individuals who desire careers in a variety of administrative support positions or careers in teaching and training others for administrative support positions. The program is structured to provide a major in office automation management with a concentration in one of three options: office systems, paralegal, or business teaching. The business teaching option prepares individuals for teaching office automation and related business subjects in junior and senior high schools, community colleges, and for employee training in industry.

Students in the business teaching option will meet the teacher certification requirements of the Virginia Department of Education upon completion of the program.

Major Requirements

The major requirements for office automation management include the major core courses and option requirements. The following requirements are for the office systems and paralegal options.

Credits

A. Major Core (15 credits)

BUS 245 Intermediate Typewriting	3
BUS 346 Automated Office Concepts	3
BUS 347 Computer Applications for the Automated Office	3
BUS 438 Office Management	3
BUS 443 Word Processing Concepts and Procedures I	3

B. Option Requirements (12 credits)

1. Office Systems Option	
BUS 349 Office Procedures	3
BUS 442 Management of Records Systems and Technologies	3
BUS 444 Word Processing Concepts and Procedures II	3
Approved Elective to be chosen from	3
BUS 331 Personnel Management	
BUS 341 Advanced Shorthand	
BUS 345 Advanced Typewriting	
BUS 361 Systems Analysis	
BUS 362 Computer Hardware and Software	
BUS 421 Small Business Management	
BUS 489 Management Seminar	
2. Paralegal Option	
BUS 450 Legal Research and Procedures	3
Approved Electives to be chosen from	9
BUS 326 Real Estate Law	
BUS 350 Tort Law	
BUS 351 Wills and Estate Administration	
BUS 427 Labor Law and Legislation	
BUS 432 Insurance Law	
3. Business Teaching Option	

The business teaching option is designed to meet teacher certification requirements and include certain courses that are unique to this program. In order to outline clearly these requirements, the complete four-year program for the business teaching option is presented here.

a. Foundation Program (54-57 credits)	
1. General Education Requirements (42 credits)	
Humanities (12 credits)	
ENG 101-102 Composition and Rhetoric	6
English electives—Literature or foreign language	6
Social Studies (15 credits)	
HIS 103, 104 Introduction to American History	6
ECO 201-202 Principles of Economics	6
PSY 101 Introduction to Psychology	3
Science and Mathematics (14 credits)	
BIO 101-102, L101, L102 General Biology and Lab	8
BUS/MAT 111-112 Mathematics for Behavioral, Social, and Management Sciences	6
Physical Education (1 credit)	1
2. School of Business Core (9 credits)	
BUS 203-204 Introduction to Accounting	6

BUS 260 Information Systems Concepts	3
3. All lower division course require- ments in the chosen endorsement (see below) must be completed as part of the foundation program	3-6
b. Advanced Program (69-72 credits)	
1. School of Business Core (27 credits) (See School of Business core for the Ad- vanced Program, listed on page 177)	
2. General Education Requirements (6 credits)	
Social Studies	
PSY/EDU 305 Educational Psychology	3
Health	
HED 300 Introduction to Health Education	3
3. Professional Studies (18 credits)	
EDU 300 Foundations of Education	3
EDU 310 Practicum	3
EDU 485-486 Directed Student Teaching I and II	12
4. Major Requirements (24 credits)	
a. Major core (6 credits)	
BUS 438 Office Management	3
BUS 443 Word Processing Concepts and Procedures I	3
b. Endorsements (18 credits)	
General Office Procedures:	
BUS 145 Beginning Typewriting*	3
BUS 245 Intermediate Typewriting*	3
BUS 345 Advanced Typewriting	3
BUS 349 Office Procedures	3
BUS 453 Teaching Accounting and Basic Business	3
Approved Elective	3
or	
Stenography:	
BUS 241 Beginning Shorthand*	3
BUS 242 Intermediate Shorthand	3
BUS 341 Advanced Shorthand	3
BUS 345 Advanced Typewriting	3
BUS 349 Office Procedures	3
BUS 455 Teaching Secretarial Subjects	3

or

Data Processing:	
BUS 145 Beginning Typewriting*	3
BUS 453 Teaching Accounting and Basic Business	3
Information Systems Courses**	3

* These courses must be completed in the foundation pro-gram.

* Other courses may be substituted for students who, with previous experience, pass the most advanced course; however, at least three credits in typewriting must be completed and shown on the student's transcript.

** Twelve credits of Information Systems courses in addition to BUS 260.

Double Majors

By carefully choosing available electives, students may meet the requirements for more than one major with minimal additional credits beyond those required for one major. Students declare a double major through the change-of-major process in University Enrollment Services. Students admitted to two majors are assigned an advisor in each major.

PREPARATION FOR THE STUDY OF HEALTH CARE MANAGEMENT

The School of Business cooperates with the School of Allied Health Professions in offering a program of study that meets the minimum academic requirements for applying to the degree of Bachelor of Science in health care management. Students in health care management may concentrate in long-term care administration or in health care management. Interested students must apply to the School of Allied Health Professions for admission prior to the beginning of the junior year. Students preparing to apply for admission to the program are advised to follow the course requirements suggested below. Satisfactory completion of the following two-year preparatory program does not constitute admission to the junior and senior year professional program. Admission to the program will be based on scholastic record, demonstrated aptitude and interest, and a personal interview by the departmental admissions committee.

Dr. Michael W. Pitts is the School of Business faculty advisor for students completing the preparatory program for health care management. The suggested program is

	Credits
ENG 101-102 Composition and Rhetoric	6
BUS 111-112 or MAT 111-112 Mathematics	6
PSY 101 General Psychology	3
Laboratory Science	8
One of the following:	
BIO 101-102 General Biology; and	
BIO L101-L102 General Biology Laboratory; or	
CHE 101-102 General Chemistry; and	
CHE L101-L102 General Chemistry Laboratory; or	
CHE 103-104 Introduction to Modern Chemistry, and	
CHE L103-L104 Introduction to Modern Chemistry Laboratory; or	
PHY 101 Foundations of Physics, PHY 102 Frontiers of Physics, and	
PHY L101-L102 Laboratory; or	
PHY 201-202 General Physics	
Government	3
One of the following:	

POS 101 or 102 American Government; or	
POS 202 Introduction to Comparative Government	
History	3
One of the following:	
HIS 101 or 102 Introduction to European History; or	
HIS 103 or 104 Introduction to American History	
Humanities	6
Any six credits from:	
ENG 201, 202 Western World Literature; or	
ENG 203, 204 English Literature; or	
ENG 205, 206 American Literature; or	
PHI 103, 104 Introduction to the History of Western Philosophy	
ECO 203 Introduction to Economics; or	
ECO 201 Principles of Economics I	3
BUS 203-204 Introduction to Accounting	6
BUS 260 Information Systems Concepts	3
Electives	13
Choose from additional courses above or others, including:	
ECO 202 Principles of Economics II	
PHI 211 Ethics	
POS 201 Introduction to Politics	
SOC 101 General Sociology	
SPE 121 Effective Speech	
Total	60

PREPARATION FOR THE STUDY OF LAW

CAROL D. RASNIC	Department of Business Administration and Management, Advisor
HUSAIN MUSTAFA	Department of Political Science, Advisor
JAMES L. HAGUE	Department of Administration of Justice and Public Safety, Advisor

Few law schools list specific undergraduate courses as prerequisites for admission. Thus the student who is considering law school education may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to obtain a broad liberal arts background with emphasis on the social sciences and English.

The prelaw school advisors maintain continual contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedure, or the law school admissions test.

GRADUATE PROGRAMS IN BUSINESS AND ECONOMICS

MOUSTAFA H. ABDELSAMAD

Associate Dean for Graduate Studies

The School of Business offers graduate work leading to the degrees of Master of Business Administration, Master of Science in business, Master of Arts in economics, Master of Accountancy, Master of Taxation, and the Doctor of Philosophy in business. The programs are designed to prepare candidates for responsible participation in business, industry, government, and education. Details of the programs are given in a separate graduate bulletin which will be sent upon request. Write to the Associate Dean for Graduate Studies, School of Business, Virginia Commonwealth University, 1015 Floyd Avenue, Box 4000, Richmond, VA 23284-0001.

A student may not enroll in any graduate courses in the School of Business without first being formally admitted to a VCU graduate program. Exceptions to this policy are made only with written permission of the associate dean for graduate studies in business.

EXTERNAL AFFAIRS

DENNIS M. O'TOOLE

Associate Dean for External Affairs

The associate dean for external affairs has primary responsibility for coordinating all School of Business activities that reach out into the community. This office is concerned with overall direction of activities of the Management Center, the Virginia Council on Economic Education, the noncredit aspects of the real estate, insurance, and small business programs, and other external activities not directly related to academic degree programs. The associate dean for external affairs also assists the School of Business Alumni Association with its activities and programs.

MANAGEMENT CENTER

HOWARD R. MEAD, JR.

Director

E. Cofer Loomer

Diane M. Rossini

The Management Center sponsors continuing education programs in business-related fields. The programs are designed to help people further their professional careers in business, government, research, and education. These programs are conducted by university faculty or practicing

professionals in on-campus facilities or at off-campus locations. Programs open to the public are offered on an individual participant fee basis. "In-house" programs are conducted for client companies or organizations under a contractual agreement. Continuing education programs may represent the total training effort of an organization or may supplement its internal training.

The Management Center serves as a point-of-contact for persons, companies, and organizations desiring to locate and arrange for School of Business faculty teaching, consulting, and research services.

Virginia Council on Economic Education

The purpose of the council is to encourage and promote a better understanding of economics and the American economy among Virginia school administrators, teachers, community members, and the public. VCU serves as one of eight Centers on Economic Education and implements workshops and conferences involving area clergy, high school students, and legislators.

Insurance Studies Program

The program is designed to educate and promote awareness in areas such as risk management, insurance, and financial services. Both academic and professional programs that work closely with area insurance professionals are offered.

Small Business Development Program

Students participating in this program become involved in consulting, counseling, and research related to a particular business problem. Students are encouraged to provide extensive plans to implement their solutions.

Virginia Real Estate Research Center

The center provides information to educators, real estate professionals, and the public concerning current market trends. Extensive research is conducted on land developing, real estate marketing and financing, and home and business construction. Quarterly and annual reports summarizing the center's research are developed and made available to the public.

The center also searches for innovative ideas for improving future real estate markets.

Alfred L. Blake Chair of Real Estate

This chair, which has been endowed by the Virginia Realtors Foundation, ranks third in the nation in the amount of its funding. It provides financial assistance to the endowed chairholder for research and support services. The purpose of the chair is to promote an understanding of real estate operations by providing both credit and noncredit courses.

COURSES IN BUSINESS (BUS)

111/Mathematics 111 Basic Mathematics for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: one year of high school algebra and a satisfactory score on the Mathematics Placement Test. Topics include sets, functions, exponents, logarithms, mathematics of finance, matrix algebra, systems of equations, and linear programming. Students may not receive degree credit for both BUS/MAT 111 and MAT 101.

112/Mathematics 112 Elements of Calculus for the Behavioral, Social, and Management Sciences. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 101 or BUS/MAT 111. Differential calculus, integral calculus.

121 The Business Environment. Semester course; 3 lecture hours. 3 credits. Concepts and issues in contemporary business. (Not open to juniors and seniors in the School of Business.)

145 Beginning Typewriting. Semester course; 3 lecture hours. 3 credits. Includes the development of skill in typing letters, manuscripts, and simple statistical work. May not be taken for credit by persons who have received credit for as much as two semesters of prior instruction in typewriting at any level, except with permission of the department chairman.

203–204 Introduction to Accounting. Continuous course; 3 lecture hours. 3–3 credits. Theoretical and technical facets of financial and managerial accounting for business. Accumulation, analysis, interpretation, and uses of accounting information.

205 Introductory Accounting Survey. Semester course; 3 lecture hours. 3 credits. An accelerated course covering theoretical and technical facets of financial and managerial accounting for business. Accumulation, analysis, interpretation, and uses of accounting information. Restricted to students in the Post-Baccalaureate Certificate in accounting program. May not be counted toward any of the B.S. programs offered by the School of Business.

241–242 Beginning and Intermediate Shorthand. Continuous course; 3 lecture and 2 laboratory hours. 3–3 credits. Prerequisite: BUS 145 or equivalent. A course in shorthand theory and dictation with an introduction to transcription. BUS 241 may not be taken for credit by persons who have received credit for two semesters of prior instruction, and BUS 242 may not be taken for credit by persons who have received credit for four semesters of prior instruction, except with permission of the department chairman.

245 Intermediate Typewriting. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 145. Includes develop-

ment of typewriting speed and accuracy and the application of typewriting to business papers. May not be taken for credit by persons who have received credit for as much as four semesters of prior instruction in typewriting at any level, except with permission of the department chairman.

260 Information Systems Concepts. Semester course; 3 lecture hours. 3 credits. Designed to introduce students to concepts and procedures involved in the development and use of automated information systems. Covers computer and programming concepts, the system development process, and areas of system application. Students may not receive degree credit for both BUS 260 and CSC 150.

301–302 Business Statistics. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: BUS 111–112 or MAT 111–112. Statistical methods employed in the analysis of business and economic data and applications in decision making. First semester: index numbers, time series analysis, descriptive measures, probability, sampling, and hypothesis testing. Second semester: nonparametric methods, regression and correlation, analysis of variance, decision theory, emphasis on problem formulation and interpretation. Students may not receive degree credit for both BUS 301 and STA 213.

303–304 Intermediate Accounting I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisites: BUS 204 and 260 and BUS 307 (for BUS 304). Theoretical standards and procedures for accumulating and reporting financial information about business. Classification, valuation, and timing involved in determination of income and asset/equity measurement.

305 Tax Planning for Individuals. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 203. Not open to accounting majors. Credit will not be given for both this course and BUS 405. A general course in tax accounting concepts and procedures for students with a minimum of previous work in accounting. Emphasis is on aspects of taxation affecting the individual: federal and state income, estate, inheritance, gift, excise, and payroll taxes; fundamentals of tax planning.

306 Cost Accounting. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 204 and BUS 307. Cost accumulation for inventory pricing and income determination. Cost behavior concepts for planning and control. Job order and process cost systems, standard costs, budgets, and special topics in relevant costs for managerial decisions.

307 Accounting Systems. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 204 and 260. Examines centralized, decentralized, and distributed accounting systems. Emphasis is on the analysis, design, development, documentation, testing, implementation, and review of accounting systems in corporations and other organizations.

308 Introduction to Marketing. Semester course; 3 lecture hours. 3 credits. Prerequisites: junior standing and ECO 201. An introduction to the activities involving the exchange of goods, services, and ideas for the satisfaction of human wants. Marketing is examined as it relates to the other functions of the organization, to consumers, and to society.

309 Marketing in the Changing World. Semester course; 3 lecture hours. 3 credits. Prerequisites: junior standing, ECO 201–202 and BUS 308. A study of the uncontrollable forces which shape the markets in which firms operate. Includes

consideration of the social, political, legal, technological, and economic environments and emphasizes the challenges and opportunities confronting marketing managers as they adapt to change.

310 Introduction to Marketing Research. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 302. Co-requisite: BUS 308. Students are introduced to the marketing research process. Includes methodology, data collection, sampling, and analysis. Students learn to plan basic research studies and to apply findings to marketing decisions.

311 Financial Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 204 and junior standing. Principles of optimal financial policy in the procurement and management of wealth by profit-seeking enterprises; the application of theory to financial decisions involving cash flow, capital structure, and capital budgeting.

315 Personal Finance. Semester course; 1–3 lecture hours. 1–5 credits. Designed to assist families and individuals in making complex financial decisions. Units include income and expenditure, credit, borrowing, banking, savings, insurance, home buying, investment, and estate planning. May not be taken for degree credit by School of Business majors.

316 Principles of Real Estate. Semester course; 3 lecture hours. 3 credits. Principles and practices of real estate development, financing, brokerage, appraisal, legal instruments, and governmental land use influences.

317 Real Property Management. Semester course; 3 lecture hours. 3 credits. Real property economics and planning, marketing, and management of leased properties.

319 Organizational Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Introduction to the determinants and consequences of human behavior and task performance in an organizational setting. Topics include motivation, job design, group development, organizational design, communication, leadership, and change. (Replaces BUS 322 in the School of Business core.)

320 Production/Operations Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, BUS 319, and junior standing. Discipline of management and the management process within the operations of an organization. Planning and controlling of operations through decision analysis, forecasting, aggregate planning, inventory management, and quality management. (Replaces BUS 321 in the School of Business core.)

321–322 Organization and Management I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: junior standing. Integration of management and behavioral science principles, theories, and concepts which affect the productivity of resources toward the achievement of organizational goals. First semester: introduction to management. Second semester: organizational behavior. (BUS 321 is replaced by BUS 320 and BUS 322 is replaced by BUS 319 in the School of Business core. Neither will be offered after the Summer Session, 1987.)

323 Legal Environment of Business. Semester course; 3 lecture hours. 3 credits. Basic legal concepts applicable to business including the legal aspects of operating a business, contracts, employment relationships, sales, bailments, and commercial paper.

324 Legal Aspects of the Management Process. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. Legal aspects of partnerships and corporations; management rights, powers, and responsibilities.

325 Business Communications. Semester course; 3 lecture hours. 3 credits. Prerequisites: ENG 101–102 and junior standing. The solution of representative business problems through the writing of letters and reports.

326 Real Estate Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323, equivalent, or permission of instructor. Legal fundamentals of real estate including contracts, concepts of title, title examination, easements, conveyances, liens, and recording statutes.

327/English 327 Business and Technical Report Writing. Semester course; 3 lecture hours. 3 credits. Development of critical writing skills used in business, science, technology, and government, including instructions, descriptions, process explanations, reports, manuals, and proposals. The course will include such topics as communication theory, technical style, illustrations, formats for proposals, reports, and manuals.

331 Personnel Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 321 or permission of instructor. Basic problems of employment, selection, and placement; wage levels and methods; job studies and descriptions; training methods and programs; and employee rating systems.

333 Risk and Insurance. Semester course; 3 lecture hours. 3 credits. Nature of risk; insurance and other risk handling methods; insurance as an institution; examination of basic life, health, property, and liability principles and coverages.

339 Management Science. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 301. Concepts and techniques of management science as they apply to solving business problems, with a focus on applications. Includes linear programming, transportation method, PERT/CPM, queueing models, and simulation.

340 Operations Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301 and 322 or permission of instructor. Analyzes the operational problems of organizations; process analysis, man-machine interfaces, work measurement, work sampling standards, layouts, scheduling, and quality control.

341 Advanced Shorthand and Transcription. Semester course; 3 lecture and 2 laboratory hours. 3 credits. Prerequisites: BUS 242 and 345 or equivalent. This course develops dictation speeds from 90 to 120 words a minute and transcription speeds from 20 to 30 words a minute.

345 Advanced Typewriting. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 245 or equivalent. Students develop maximum typewriting speed and accuracy for sustained periods of time. Advanced typewriting problems and production speed are emphasized.

346 Automated Office Concepts. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing. Application of office automation to the administrative services function performed in the modern business office. An overview of current automated office technologies with special attention to the interrelatedness and integration of word,

data, voice, and image processing for managing and channeling information.

347 Computer Applications for the Automated Office. Semester course; 3 laboratory/lecture hours. 3 credits. Prerequisites: junior standing; BUS 260. Use of microcomputers and software packages for accounting applications, text-editing, computer graphics, data bases, electronic mail, and networking.

349 Office Procedures. Semester course; 3 lecture hours. 3 credits. Designed for secretarial students to provide a knowledge of duties and current office procedures required by an efficient business organization.

350 Tort Law. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. Basic concepts of tort law with emphasis on intentional torts, negligence, causation, proximate cause, strict liability, vicarious liability, nuisance, tort and contract, misrepresentation, defamation, privacy, and domestic relations.

351 Wills and Estate Administration. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. Basic legal concepts of intestacy and of the more common form of wills, together with a study of procedures relating to probate and administration of decedents' estates.

361 Systems Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 260 or permission of instructor. Develops ability to analyze an existing information system within an organization, to identify information requirements, and to specify the functions of a new information system. Includes cost/benefit analysis of proposed information systems.

362 Computer Hardware and Software Operations. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 260. Describes and develops concepts and principles of operation of computer hardware and software and communications systems.

363 COBOL Programming. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 260 or permission of instructor. Introduction to the basic concepts of computer program design using the COBOL programming language, including data structures, fundamental operations on data structures, and algorithmic structures.

364 Applications Programming. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 363. Covers development of typical data processing programs in COBOL. Includes job control language, debugging, random access files, and other subjects necessary for the implementation of applications programs.

365 System Design. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 361 and 363. Study and practice of design techniques required for the physical implementation of computer-based information systems.

366 Computerware Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 362. Surveys the performance characteristics of representative computer and related software systems, of communications systems, and of peripheral equipment which may be considered in systems design and for installation planning.

371 Elements in Advertising Strategy. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308 or permission

of chairman. Overviews the various steps in the development of an advertising strategy. Special stress placed on the study of the creative philosophies and work of leading advertising agencies.

372 Pricing and Product Strategy. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 201–202 and BUS 308. Study of price theory and policy relevant to goods and services. Introduction to basic product strategy, focusing on new product development, management of existing products, and elimination of marginal offerings. Various concepts will be addressed including market segmentation, product differentiation, the product life cycle, and the marketing mix.

373 Consumer Behavior. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 308; PSY 101 and SOC 101 recommended. Study of the relevant psychological, sociological, and anthropological variables that shape activity and motivation. Throughout the course, students consider the issue of why consumers behave as they do in the marketplace.

374 Marketing Research: Field Work. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 310. The development and evaluation of research projects. Students develop a research proposal and carry out a field project.

376 Dynamics of Retail Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308. A comprehensive view of retailing and an application of marketing concepts in a practical retail managerial environment. Students learn to evaluate retail firms and to identify their strengths and weaknesses.

377 Channel Systems. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308. Concerns the development, complexities, benefits, and pitfalls of channel of distribution systems.

379 Logistics and Physical Distribution. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308 or permission of chairman. This course focuses on the corporate approaches to decision-making in the area of transportation, inventory, facility location, warehousing, communications, and customer service. The teaching techniques used stress a case-oriented approach in combination with the use of simulation. Particular emphasis is given to interfacing the areas of logistics and physical distribution with the marketing function of the firm.

404 Advanced Accounting. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 304. Financial accounting for complex business relationships, including home office-branch accounting, business combinations, consolidated financial statements, partnerships, and governmental funds.

405 Tax Accounting. First semester; 3 lecture hours. 3 credits. Prerequisite: BUS 204. Income tax legislation and the concept of taxable income; federal income tax law applicable to individuals.

406 Auditing. First semester; 3 lecture hours. 3 credits. Prerequisites: BUS 301 and 304. Auditing standards, reports, ethics, audit programs, working papers, and internal controls.

407 Auditing Methods. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 260, 301, and 406. Topics in-

clude statements on auditing standards, unaudited statements, advanced statistical sampling applications, and auditing in computer environments.

410 Advanced Tax Accounting. Second semester; 3 lecture hours. 3 credits. Prerequisite: BUS 405. Complex tax problems of the trust, partnership, and corporation. Particular emphasis is given to tax planning.

411 Accounting Opinions and Standards. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 304. A technical course concerned with pronouncements of the public accounting profession. The course objective is to familiarize students with present and proposed accounting opinions and standards.

415 Investments. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 311, 302, or permission of instructor. An analysis of the market for long-term corporate securities. Emphasis is given to the valuation of bonds, common stocks, options, and convertible securities and portfolio theory. Designed to provide an understanding of the functioning of an efficient market.

417 Cases in Financial Management. Second semester; 3 lecture hours. 3 credits. Prerequisite: BUS 311. Cases involving financial decisions for various forms of business enterprises.

418 International Management. Second semester; 3 lecture hours. 3 credits. Management attitudes and concepts of other nations, cultures, or geographic regions compared with the United States.

420 Seminar in Industrial Relations. Second semester; 3 lecture hours. 3 credits. Prerequisite: BUS 331 or permission of instructor. Managerial decision-making in labor management relationships; the collective bargaining process and the administration of labor agreements; the impact of public policy and labor legislation.

421 Small Business Management. Semester course; 3 lecture hours. 3 credits. The importance, problems, and requirements of small businesses; establishing policies for prices, promotion, control, and credit; regulations, taxes, records, and record keeping.

423 Real Estate Brokerage. Semester course; 3 lecture hours. 3 credits. Considers administrative principles and practices of real estate brokerage, financial control and marketing of real property.

424 Property and Liability Insurance. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 333 or permission of instructor. Property and liability risk identification and measurement. Major commercial lines coverages including fire, marine, automobile, general liability, worker's compensation, fidelity, and surety bonds.

425 Real Estate Appraisal. Semester course; 3 lecture hours. 3 credits. Designed for persons who have completed a course in principles of real estate or its equivalent, or have experience in the real estate field. Topics include neighborhood and site analysis using cost, market, and income approaches. Students may apply to write AIREA examinations upon completion of this course.

426 Life and Health Insurance. Second semester; 3 lecture hours. 3 credits. The function, nature, and uses of life and health insurance and annuities; operational aspects of life insurance companies.

427 Labor Law and Legislation. First semester; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. A comprehensive review of labor law and legislation applicable to business.

428 Employee Benefit Planning. Semester course; 3 lecture hours. 3 credits. Prerequisite: junior standing or permission of instructor. Management of group life, health, disability, and retirement plans. New developments in employee benefits, plan design, administration, cost, funding, regulation, and tax considerations.

429 Real Estate Finance. Semester course; 3 lecture hours. 3 credits. Instruments, techniques, and institutions of real estate finance; the mortgage market; financing process; mortgage risk analysis; creative financing; emphasis on policies and procedures used in financing residential and commercial properties.

430 Social Insurance. Semester course; 3 lecture hours. 3 credits. Societal and individual financial problems encountered as the result of disability, unemployment, aging, and death. Insurance solutions through governmental and private techniques.

431 Advanced Real Estate Appraisal. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 425 or permission of instructor. Provides a comprehensive study of the principles and concepts underlying the income approach to investment property appraisal and the mathematics of yield capitalization. Students may apply to write AIREA examinations upon completing this course.

432 Insurance Law. Semester course; 3 lecture hours. 3 credits. The legal concepts and doctrines applicable to insurance. Fundamental legal aspects of life, health, property, and liability insurance.

433 Compensation Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 331. The methods and techniques of obtaining job descriptions, job characteristics and measuring scales, job rating, and the awarding of wage increments.

434 Policy Determination. Semester course; 3 lecture hours. 3 credits. Prerequisites: senior standing in a School of Business major and completion of all 300-level School of Business core courses. Integrative course to analyze policy issues at the overall management level, involving functional areas such as production, finance, and marketing, in context with the economic, political, and social environment.

435 Seminar in Personnel Management. First semester; 3 lecture hours. 3 credits. Prerequisite: BUS 331 or permission of instructor. A critical study of selected problems in personnel management.

436 Case Analysis of the Small Firm. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 421 or permission of instructor. Analysis of an on-going business. Students are actively involved in counseling existing small firms on specific problem areas. Various strategies for success are explored and factors in entrepreneurial competency are discussed.

437 Funds Management in Financial Institutions. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 311. Funds management techniques for selected financial institutions including investment companies (mutual funds), life

and casualty insurers, savings and loans, mutual savings banks, commercial banks, pension funds.

438 Office Management. Semester course; 3 lecture hours. 3 credits. Organization and management of a business office, including office systems, selecting and supervising employees, work measurement, salary administration, workflow analysis, office layouts, and overcoming resistance to change in the office.

440 Forecasting Methods and Process. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 301 or equivalent. An application-oriented presentation of forecasting process and forecasting methods to support planning and decision making. Statistical forecasting methods are emphasized, including exponential smoothing, decomposition, and regression. Also includes experience with computer software.

441 Production Planning and Control Systems. Second semester; 3 lecture hours. 3 credits. Prerequisites: BUS 339 and 340. Production planning and control systems, focusing on manufacturing firms. Topics to be covered include forecasting, statistical inventory control, material requirements planning, aggregate production planning.

442 Management of Records Systems and Technology. Semester course; 3 lecture hours. 3 credits. Prerequisites: junior standing, BUS 438, or permission of department chairman. Principles of records control from creation to disposition. Emphasis on forms management, classification systems, legal retention policies, development of organization-wide policies and procedures, and equipment and supplies selection. Also includes micrographic applications in records management.

443–444 Word Processing Concepts and Procedures I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: BUS 245 or the equivalent. This course is designed to introduce the student to word processing concepts, equipment, and procedures. Simulated exercises provide experience in using modern word processing equipment and techniques.

448, 449 Professional Secretarial Training. Semester courses; 3 lecture hours. 3, 3 credits. Designed for secretaries who desire to broaden their educational background. Special emphasis is placed on accounting, business administration, human relations, personal adjustment, general secretarial and office procedures, and letter composition. The year course will serve as partial preparation for the Certified Professional Secretary examination given each May by Professional Secretaries International.

450 Legal Research and Procedure. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 323 or permission of instructor. Examines in depth the law library, explains the basic tools of legal research, and demonstrates the methodology of presenting the results of legal research.

453 Teaching Accounting and Basic Business. Semester course; 3 lecture hours. 3 credits. Designed for prospective teachers of accounting, general business, and other basic business subjects. It encompasses methods of teaching these subjects and a survey of currently used textbooks and available resource materials.

455 Teaching Secretarial Subjects. Semester course; 3 lecture hours. 3 credits. Designed for prospective teachers of shorthand, typewriting, and office practices. It encompasses

methods of teaching these subjects and a survey of currently used textbooks and available resource material.

460 Assembler Programming. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 364. Develops ability to code, test, and debug assembler language programs.

461 System Project Planning. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 365. Concentrated study of planning methods and techniques required for information systems projects. On completion, students should be able to apply knowledge of systems analysis and programming to plan and carry out a complete systems project.

462 Control Programming. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 460 and 465. Study of operating file management and I/O systems. Designed to prepare students to work with software which controls and coordinates asynchronous and parallel processes.

463 Selected Programming Languages. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 363 or equivalent. Consists of programming languages in which the student will perform programming exercises and problems under supervision. Selection of languages is determined each semester.

464 Data Base Systems. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 465. Designed to prepare students for development of systems involving data bases and data base management.

465 Advanced Program Design Techniques. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 363 or permission of instructor. Pre- or co-requisite: BUS 365. An advanced programming course giving special attention to techniques for program design and the evaluation and selection of data structures and algorithms.

467 Distributed Data Processing and Telecommunications. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 301, 361, 362, and 363 or their equivalents. Technology and concepts of telecommunications and distributed processing, including managerial concerns and interests, hardware, systems design, and operation factors.

468 Direction and Coordination of Information Systems Organizations. Semester course; 3 lecture hours. 3 credits. Pre- or co-requisite: BUS 461 or permission of instructor. A study of management techniques as applied to direction and coordination of information systems personnel and organizations. Involves readings, group discussion, and case study/assignments.

469 Information and Decision Systems in Organizations. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 361, BUS 362, BUS 365, or permission of the department chairman. The ways in which information and decision system technologies affect the management of complex organizations. Emphasis on the impact of computer-aided decision and control processes on planning, financial, production, marketing, and other subsystems.

471 International Marketing. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308 or permission of chairman. This course is designed to orient students toward marketing on an international scope and to develop an understanding of the differences among various types of foreign marketing environments. Subject areas emphasized are the differences between domestic and international mar-

keting, the international marketing environment, and international marketing strategies.

472 Trends in Retailing. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308. BUS 376 recommended. An examination of current and developing trends that will affect the future posture of retailing.

474 Sales Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 308. Restricted to senior-level marketing majors or to students having permission of chairman. Examines the fundamental nature of personal selling in the promotion mix, and explains the diverse decisions and activities necessary to manage the outside sales force efficiently and effectively to achieve the organization's primary goal—sales revenue.

476 Marketing Management. Semester course; 3 lecture hours. 3 credits. Prerequisite: restricted to senior-level marketing majors who have completed a minimum of 15 credits of marketing courses (in addition to BUS 308). A case course requiring the senior marketing student to apply his knowledge to the solving of marketing managerial problems.

478 Advanced Marketing Research. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 302, 374, or permission of instructor. An introduction to advanced analytical techniques, building on traditional data-gathering procedures. State-of-the-art marketing research methodology will be discussed.

481–482 Law for Accountants I and II. Continuous course; 3 lecture hours. 3–3 credits. Prerequisite: senior accounting major or permission of instructor. Provides detailed examination of laws which are of particular importance to accountants. First semester: contracts, sales, agency, commercial paper, secured transactions, and bankruptcy. Second semester: security regulations, antitrust, partnerships, corporations, suretyship, insurance, wills, and trusts.

489 Management Seminar. Semester course; 3 lecture hours. 3 credits. Prerequisites: BUS 321–322 and senior standing in business management or permission of instructor. A critical analysis of management concepts.

491 Topics in Business. Semester course; variable credit, maximum three credits per topics course; maximum six credits for all topic courses. An in-depth study of a selected business topic, to be announced in advance.

492 Independent Study. Semester course; 1–3 credits. Maximum total of three credits. Prerequisites: junior or senior standing as a major in a business curriculum, approval of advisor and department chairman prior to registration. Intensive study under supervision of a faculty member in an area not covered in depth or contained in the regular curriculum.

493 Internship. Semester course; 3 credits. Prerequisite: senior standing in the major offering the internship and permission of the department chairman. Internships currently offered in marketing and information systems. Intention to enroll must be indicated to the instructor prior to or during advance registration for semester of credit. Involves students in a meaningful experience in a setting appropriate to the major.

For the listing of graduate courses in the School of Business, see the *VCU Graduate Bulletin*.

COURSES IN ECONOMICS (ECO)

201–202 Principles of Economics. Continuous course; 3 lecture hours. 3–3 credits. A course designed to acquaint the student with a theoretical and practical understanding of the economic institutions and problems of the American economy. First semester: Macroeconomics; second semester: Microeconomics.

203 Introduction to Economics. Semester course; 3 lecture hours. 3 credits. A survey of economic principles, institutions, and problems. The course is designed to provide basic economic understanding for students who do not expect to take additional economics courses. (Not open to School of Business students.)

301 Microeconomic Theory. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 201–202. Analysis of the principles that govern production, exchange, and consumption of goods and services. Topics include demand analysis, production and cost theory, price and output determination, theory of markets, and distribution theory.

302 Macroeconomic Theory. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. A general survey of national income analysis and macroeconomic theory. Detailed study of public policies affecting price levels, employment, economic growth, and the balance of payments.

303 Managerial Economics. Semester course; 3 lecture hours. 3 credits. Prerequisites: ECO 201–202 and BUS 111–112. Application of tools of economic analysis to allocation problems in profit and nonprofit organizations. Models for evaluating revenue, production, cost, and pricing will be presented. Emphasis on developing decision rules for turning data into information for solving problems.

305 Public Finance—State and Local. First semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An economic analysis of state and local government budgeting, revenue sources, and expenditures.

306 Public Finance—Federal. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An economic analysis of the fiscal decision process, revenue sources, and expenditures at the federal level.

307 Money and Banking. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. A study of money, financial markets, and the financial structure with emphasis on commercial banks and the Federal Reserve System. Relationships between economic activity and money supply are introduced.

308 Economic Geography. Semester course; 3 lecture hours. 3 credits. A study is made of the earth's natural and physical resources with emphasis placed on the relationship of these resources to actual and potential economic development of various nations.

310/Afro-American Studies 310 Economics and Poverty. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202 or 203. An analysis of the causes of income inequality, the incidence and characteristics of poverty, and the economics of public policies designed to counteract poverty.

313 Economics of Transportation. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An economic analysis of the transportation industry with special

emphasis on regulation, public policy, and urban transportation.

315/Afro-American Studies 315 Economic Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. Introduction to the process of economic development. Surveys development theory and experiences of underdeveloped countries of Africa, Asia, Latin America and the Caribbean, and of developed countries. Explores obstacles to development and policies and tools for stimulating economic development.

319/History 377 Economic History of the United States. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An analysis of the developmental factors from the American colonial period to the present. Includes quantitative research topics in American economic history.

320/HIS 335 Economic History of Europe. First semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202 or 203. Studies of the origins and development of western capitalistic economies with emphasis on transitional factors and institutional changes.

321/Urban Studies 321 Urban Economics. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 201–202 or 203 and USP 303 or permission of instructor. An introduction to urban economics, with an emphasis on the economics of agglomeration and the role of externalities in the urban economy. Economic analysis of the provision of urban public services and urban public financing, especially in politically fragmented areas.

329 International Economics. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An analysis of economic and political influences on exports and imports, balance of payments, foreign investment, exchange rates, and international monetary systems.

401 Introduction to Econometrics. First semester; 3 lecture hours. 3 credits. Prerequisites: ECO 201–202 and BUS 301. Sources and uses of economic data; includes the application of statistical methods and regression analysis to time series and cross section data to test hypotheses of micro and macro economics.

402 Business Cycles and Forecasting. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. An examination of repetitive variations in business activity. The measurement and analysis of economic fluctuations and how they affect the business environment. Stresses modern forecasting techniques.

403 Introduction to Mathematical Economics. Semester course; 3 lecture hours. 3 credits. Prerequisite: BUS 112 or

MAT 200 and ECO 201–202. The application of mathematical techniques to economic theory and economic models.

412 Regional Economics. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. A course to familiarize students with sources and uses of standard data on employment, income, and population and to provide an introduction to economic base theory as used in regional economics. Application of theory. To make and analyze economic and demographic projections for regions in Virginia. Analysis of operation and impact of area economic development programs.

419 History of Economic Thought. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. A survey of the ideas of major economic contributors to modern economic thought. Theories of value, growth, and distribution from the eighteenth through the twentieth centuries will be presented.

421 Government and Business. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. The application of economic analysis to the behavior of business, industry, and government regulation. Topics include the causes and exercise of monopoly power, antitrust enforcement, public utilities, and industry studies.

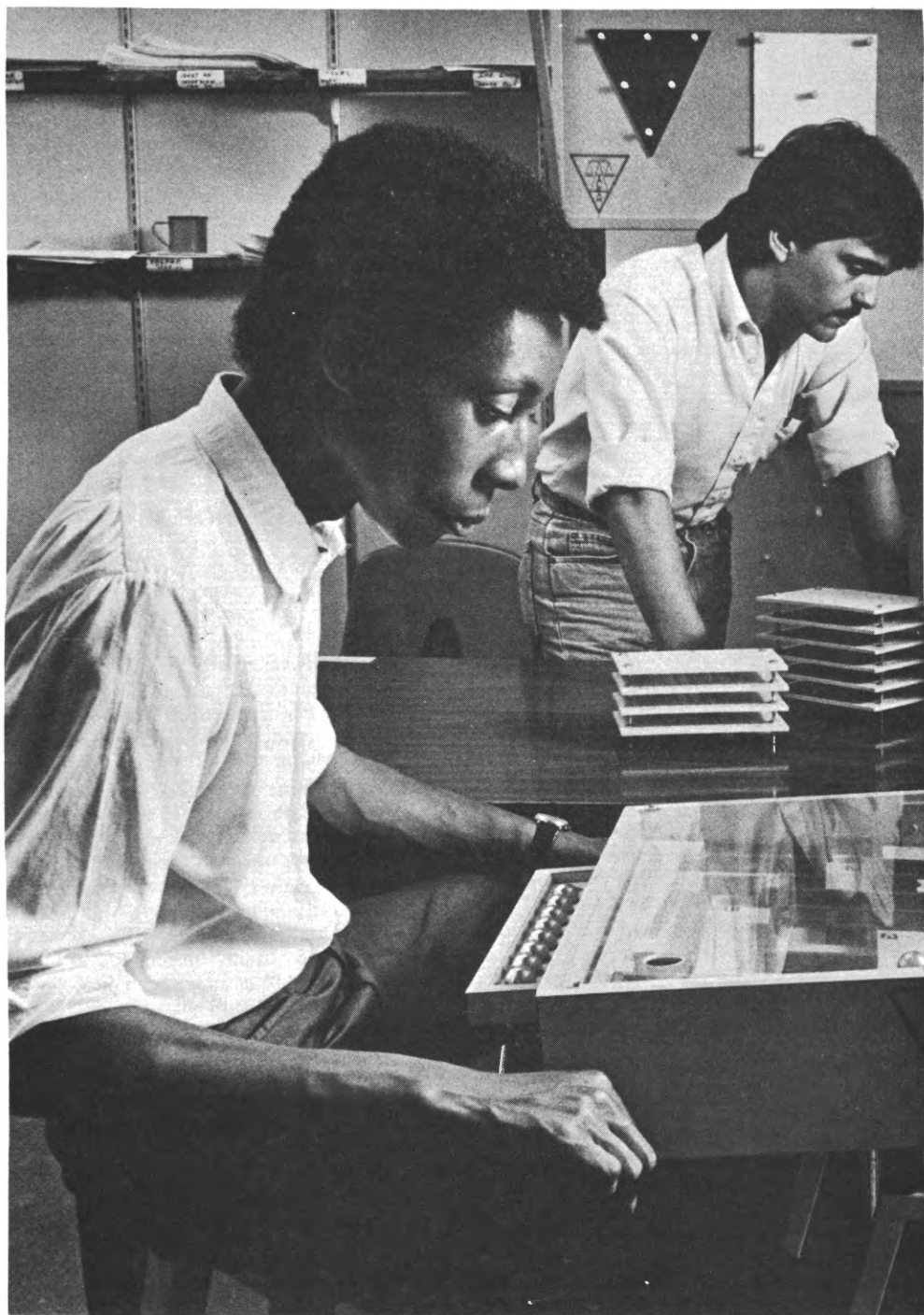
431 Labor Economics. Second semester; 3 lecture hours. 3 credits. Prerequisite: ECO 201–202. Analysis of labor markets and institutions to gain an understanding of the process of wage and employment determination. Both historic and current topics are included.

489 Senior Seminar in Economics. Second semester; 3 lecture hours. 3 credits. Prerequisites: ECO 301 and 302 or permission of instructor. Papers on current research of enrolled students, faculty, and guests. Analysis of economic theory and problems on advanced level.

491 Topics in Economics. Semester course; variable credit, maximum three credits per topics course; maximum six credits for all topics courses. An in-depth study of a selected economic topic, to be announced in advance.

492 Independent Study. Semester course; 1–3 credits. Maximum total of three credits. Prerequisites: junior or senior standing as an economics major, approval of advisor and department chairman prior to registration. Intensive study under supervision of a faculty member in an area not covered in depth or contained in the regular curriculum.

For the listing of graduate courses offered by the Department of Economics, see the *VCU Graduate Bulletin*.



Students in the School of Community and Public Affairs receive a professionally oriented education with emphasis on understanding the modern world and preparing students for careers in administrative, service, and helping organizations.

PART XI—School of Community and Public Affairs

LAURIN L. HENRY

Dean

E. DAVIS MARTIN, JR.

Associate Dean

GARY T. JOHNSON

Assistant Dean

The School of Community and Public Affairs aims to produce a broadly educated person imbued with a sense of social responsibility and prepared through study, research, and field experience to perform competently both as a citizen and as a professional, providing human services in a complex urban environment.

UNDERGRADUATE PROGRAMS

The school offers a Bachelor of Science degree in the fields of

Administration of Justice and Public Safety
Recreation, Parks, and Tourism
Rehabilitation Services
Urban Studies and Planning

GRADUATE PROGRAMS

The School of Community and Public Affairs offers graduate programs leading to the Doctor of Public Administration (D.P.A.), Master of Science in rehabilitation counseling (M.S.), Master of Science in recreation (M.S.), Master of Science in administration of justice (M.S.), Master of Urban and Regional Planning (M.U.R.P.), and Master of Public Administration (M.P.A.). Detailed information is available

in the *VCU Graduate Bulletin* available in the dean's office.

GENERAL GRADUATION REQUIREMENTS

All students in the School of Community and Public Affairs must fulfill these requirements:

1. **Grade-Point Average.** A grade-point average (GPA) of at least 2.0 (a "C" average) is required for all credits presented for graduation for the bachelor's degree. (Only credits taken at VCU are computed in the GPA.)
2. **Total Credits.** A minimum of 123 semester credits is required for completion of the Bachelor of Science degree in the School of Community and Public Affairs.
3. **Major Concentration.** A grade-point average (GPA) of at least 2.0 ("C" average) is required for all credit in the student's major presented for graduation. Students may not present more than 45 semester hours in the major, except by permission of department chairman.
4. **Upper-Level Courses.** A minimum of 45 credits is required in 300- and 400-level courses for a bachelor's degree. Credits transferred from two-year institutions may not be used to fulfill this requirement.
5. **Last 30 Credits.** Degree candidates are required to complete the last 30 credits at this institution for the bachelor's degree.

GENERAL CURRICULUM REQUIREMENTS

All students seeking a baccalaureate degree within the School of Community and Public Affairs are required to fulfill the following general course requirements in addition to the specific departmental curriculum. Students entering as freshmen are expected to fulfill most of these requirements in their first two years.

1. **English** (6 credits). English 101-102 Composition and Rhetoric. The English Placement Test must be taken by all students who have not received credit for first semester freshman composition and rhetoric. On the basis of these scores, students will be placed in the appropriate level of English.
2. **Mathematics** (3 credits). The Mathematics Placement Test must be taken by all students who have not received credit for a mathematics course. Any of the following courses in mathematics may be taken, depending on the placement test scores:
 - A. Mathematics 101 College Algebra
 - B. Mathematics 102 College Trigonometry
 - C. Mathematics 111/Business 111 Basic Mathematics for the Behavioral, Social, and Management Sciences
 - D. Mathematics 112/Business 112 Elements of Calculus for the Behavioral, Social, and Management Sciences
 - E. Statistics 213 Introduction to Statistics.
3. **Communicative Skills and Abilities** (3 credits). Any of the following courses may be taken to fulfill this requirement. Courses other than those suggested may be presented to fulfill this requirement but must be approved by the dean.
 - A. English 300 Practical Writing Workshop
 - B. English 302 Legal Writing
 - C. English 304 Advanced Composition
 - D. English 327 Business and Technical Report Writing
 - E. Philosophy 221 Critical Thinking
 - F. Philosophy 222 Formal Logic
 - G. Speech 121 Effective Speech
4. **Social Science Electives** (9 credits). Courses from the following suggested areas may be taken to satisfy this requirement.

- A. Anthropology
- B. Economics
- C. Political Science
- D. Psychology or Sociology
5. **Natural Science** (6 credits). Courses from one of the following suggested science sequences may be taken to fulfill this requirement. Courses other than those suggested may be presented to fulfill this requirement but must be approved by the dean.
 - A. Biology 101-102 General Biology
 - B. Chemistry 103-104 Introduction to Modern Chemistry
 - C. Geography 203-204 Physical Geography
 - D. Physics 105 Physical Geology
 - E. Physics 103 Physical Astronomy
6. **Humanities and/or History** (6 credits). Any combination of humanities and history courses may be used to satisfy this requirement.
7. **Methods of Community Analysis** (6 credits). CSE 241-242. Methods of Community Analysis.
8. **American Urban Experience** (6 credits). CSE 315 The Evolution of American Cities. CSE 316 Urban Life in Modern America.
9. **Community and Public Affairs Cognate** (3 credits). Any course in the School of Community and Public Affairs to be elected from the offerings of any department other than the student's major department. See CLEP (College Level Examination Program) information.

DEPARTMENTAL SURVEY COURSES

AJP 181 Justice System Survey
 AJP 245 Introduction to Concepts and Practices in Safety
 AJP 252 Introduction to Juvenile Justice
 AJP 253 Introduction to Corrections
 AJP 254 Introduction to Law Enforcement
 AJP 255 Introduction to Legal Studies
 REC 261 Recreation in Modern Society
 REH 201 Introduction to Rehabilitation Services

STUDENT ADVISING

Students entering the School of Community and Public Affairs will be assigned a faculty advisor in the department of their major. Students who have not made a decision concerning

their major will be assigned faculty advisors by the assistant dean, Scherer Hall, third floor, 921 West Franklin Street.

ATTENDANCE POLICY

Students who have more than six hours of absences from any course in one semester will face either automatic withdrawal or failure in that course. When more than six hours of absences accumulate prior to the eighth week of classes, the student will be automatically withdrawn. After the eighth week, absences which total more than six hours (inclusive of the preceding eight weeks) will result in failure for the student.

This policy may be modified in cases of documented family/personal crises or illness.

PREPARATION FOR PROFESSIONAL STUDIES IN LAW

JAMES L. HAGUE

Department of Administration of Justice and Public Safety,
Advisor

WALTER S. GRIGGS, JR.

Department of Business Administration and Management,
Advisor

HUSAIN M. MUSTAFA

Department of Political Science, Advisor

Few law schools list specific undergraduate courses as prerequisites for admission. Thus the student who is considering law school education may major in virtually any department in the College of Humanities and Sciences, the School of Business, or the School of Community and Public Affairs. Students, however, are encouraged to obtain a broad liberal arts background with emphasis on the social sciences and English.

The prelaw school advisors maintain continual contact with law school admissions offices and will assist any interested student with questions concerning curriculum, financial assistance, application procedures, or the law school admissions test.

COOPERATIVE EDUCATION PROGRAM

The Cooperative Education Program is available to qualifying students who are pursuing any undergraduate degree in the School of Community and Public Affairs.

A full description of the program appears on page 281 of the *Bulletin*.

ADMINISTRATION OF JUSTICE AND PUBLIC SAFETY

DAVID J. FARMER

Chairman of the Department

C. Allen Barrett

Mary J. Hageman

James E. Hooker

Paul W. Keve

(Professor Emeritus)

R. Michael McDonald

Robert J. Breitenbach

David P. Geary

James L. Hague

David Halbach

James P. Morgan, Jr.

Janice Thomas

Adjunct Faculty—

Philip L. Ash, Jr.

John Birdsall

Mason Chalkley

Aubrey Davis

Paul Ferrara

Dan Grinnan

Alfred Houghton

Frank Mardavich

Peter Marone

Morris L. Ridley

Joe Thomas

Stewart Werner

Robert Baldwin

Charles V. Bryson

V. Stuart Cook

Virginia Duvall

James Fox

John T. Hanna

Joseph Kaestner

Carol LaDue

Mike Morchower

Michael Rodgers

Thomas Varner

James B. Wilkinson

The major objective of these degree programs is to prepare men and women for highly effective professional careers within administration of justice or public safety. Career opportunities are available in federal, state, local, and private justice-related endeavors. In the administration of justice area, these careers include those open in law enforcement, juvenile justice, corrections, and the courts. In the public safety area, careers include those in fire prevention and management, occupational safety and industrial security, traffic and transportation safety, and private security. Furthermore, this department prepares students wishing to enter law school and those wishing to pursue graduate study in higher education or several of the human services closely related to justice and safety. This department offers and encourages in-service justice or safety employees, as well as others, to enhance their professional career development through higher education.

Students majoring in administration of justice or public safety receive a broad educational background, professionally oriented courses in their special area of interest and concentration, and various skill courses designed to enhance the student's career opportunities. Upon completion of a minimum of 123 semester hours, the student is awarded the Bachelor of Science in administration of justice with options available in law enforcement, juvenile justice, corrections, or legal studies. The primary purpose of the legal

studies option is to prepare students for law school. Students may choose to pursue the Bachelor of Science in public safety, with options available in traffic and transportation, fire management, occupational and industrial safety, or occupational and industrial security.

Administration of justice majors are required to complete certain departmental core courses, courses in one of the selected options, and certain skills courses. Required core courses are AJP 181, 260, 324, 352, 355, 380, 432, 463, 480, and either 492, 493, or 394. The courses most likely to be waived for eligible transfer students are 181, 260, 324, 352, 463, and 493.

Administration of justice majors select one of four career options—law enforcement, juvenile justice, corrections, or legal studies. Four courses are required in the option selected. In the law enforcement option, students take AJP 254 and 305 and any two of the following—310, 370, 434, 462, 468, 475, or 491. In the juvenile justice option, students take AJP 252, 350, and any two of the following—351, 378, 433, 462, or 491. In the corrections option, students take AJP 253, 350, and any two of the following—351, 363, 433, or 491. In the legal studies option, students take AJP 255, 358, and any two of the following—363, 378, 475, and 491. Seniors with a 3.0 GPA or with permission of the department chairman may substitute an approved 500-level course for one of the elective courses in their respective option.

Administration of justice majors then choose four skills cognates courses in one or more of the following areas—counseling related, legal analysis, information systems competency, accounting/auditing, policy analysis and planning, research and evaluation, or communications competency. In choosing electives and skills cognates, students should consider the following minors closely related to criminal justice: recreation, rehabilitation counseling, sociology, urban studies and planning, psychology, and political science.

Safety degree majors are required to complete the entire 27 semester hours of core courses as listed below. In addition, they are expected to select any one of the options as cited.

Bachelor of Science in Administration of Justice—Administration of Justice Core

Required courses for all Administration of Justice majors (30 semester hours)

¹ AJP 181	Justice System Survey
¹ AJP 260	Criminal Law
¹ AJP 324	Courts and Judicial Process
¹ AJP 352	Crime and Delinquency Prevention
¹ AJP 355	Foundations of Criminal Justice
¹ AJP 380	Criminal Justice Research
¹ AJP 432	Criminal Justice Organizations
¹ AJP 363	Comparative Criminal Justice Systems
¹ AJP 480	Seminar: Critical and Career Issues in Criminal Justice
¹ AJP 492	Directed Individual Study
	or
AJP 493	Internship
	or
AJP 394	Field Service in Criminal Justice

Career Options Requirement—Select four courses from desired career option, including both the introductory and program courses (underlined below).

Law Enforcement Option

¹ AJP 254	<u>Introduction to Law Enforcement</u>
¹ AJP 305	<u>Enforcement Theories and Practice</u>
AJP 310	Industrial and Retail Security
AJP 370	Criminalistics and Crime Analysis
AJP 434	Enforcement Administration
AJP 462	Strategies for Delinquency and Crime Prevention
AJP 468	Economic Offenses and Organized Crime
AJP 475	Case Studies in Criminal Procedure
AJP 491	Topics Seminar
² AJP 500-	level course

Juvenile Justice Option

¹ AJP 252	<u>Introduction to Juvenile Justice</u>
AJP 350	<u>Evaluation and Treatment of the Offender</u>
AJP 351	Community-Based Correctional Programs
AJP 378	Juvenile Justice Law and Process
AJP 433	Adult/Juvenile Correctional Administration
AJP 462	Strategies for Delinquency and Crime Prevention
AJP 491	Topics Seminar
² AJP 500-	level course

Corrections Option

¹ AJP 253	<u>Introduction to Corrections</u>
AJP 350	<u>Evaluation and Treatment of the Offender</u>
AJP 351	Community-Based Correctional Programs
AJP 363	Correctional Law
AJP 433	Adult/Juvenile Correctional Administration
AJP 491	Topics Seminar
² AJP 500-	level course
	(e.g., AJP 501 Criminal Justice Assessment)
	AJP 591 Topics Seminar)

¹Denotes courses most likely to be waived for community college transfers.

²Seniors with a 3.0 GPA or with permission of the department chairman may take a 500-level course.

Legal Studies Option

¹ AJP 255	<u>Introduction to Legal Studies</u>
AJP 358	<u>Lawyer's Role in the Justice System</u>
AJP 363	Correctional Law
AJP 378	Juvenile Justice Law and Process
AJP 475	Case Studies in Criminal Procedure
AJP 491	Topics Seminar
² AJP 500-	level course

Skill Cognates

Students are required to take any four skills courses in one of the following skills cognate areas. Departmental advisors maintain current lists of suitable courses and additional and/or substitute courses permitted with the approval of the student's advisor.

The skill cognate areas are

- Counseling-related
- Legal analysis
- Information systems competency
- Accounting/auditing
- Policy analysis and planning
- Research and evaluation
- Communications competency
- Other

Bachelor of Science in Public Safety—Public Safety Core

Required courses for all Public Safety Majors (21 semester hours);

AJP 245	Introduction to Concepts and Practices in Public Safety
AJP 330	Safety Codes, Standards, and Regulations
AJP 342	Public Safety in the Changing Community
AJP 344	Accident Prevention and Loss Control Management
AJP 372	Fire Prevention and Emergency Planning
AJP 492 or 493	Field Internship or Directed Individual Study
AJP 420	Human Factors and Environmental Stresses
Select <i>two</i> from the following (6 semester hours):	
AJP 324	Courts and the Judicial Process
AJP 380	Criminal Justice Research
AJP 432	Criminal Justice: Organization

Fire Prevention and Management (15 semester hours)

AJP 310	Industrial and Retail Security
AJP 371	Fire Protection and Fire Safety
AJP 415	Industrial Safety Engineering
AJP 437	Accident Analysis and Crash Prevention
AJP 472	Risk Management in Fire Administration

Occupational and Industrial Safety Option (12 semester hours)

AJP 310	Industrial and Retail Security
AJP 315	Traffic and Transportation Planning and Management
AJP 415	Industrial Safety Engineering
AJP 472	Risk Management in Fire Administration

Occupational and Industrial Security Option (12 semester hours)

AJP 310	Industrial and Retail Security
AJP 410	Security Administration
AJP 415	Industrial Safety Engineering
AJP 468	Commercial Offenses and Organized Crime

Traffic and Transportation Option (12 semester hours)

AJP 315	Traffic and Transportation Planning and Management
AJP 426	Legal Aspects of Transportation Safety
AJP 437	Accident Analysis and Crash Prevention
AJP 440	Behavioral Factors and Transportation Safety

Northern Virginia Public Safety Option

The Bachelor of Science in public safety degree is offered at two locations—on campus in Richmond and also in Northern Virginia. The Northern Virginia program is modified to permit students to complete the entire degree in the Northern Virginia area, utilizing VCU courses delivered onsite and other courses offered at George Mason University. For further information about the Northern Virginia Public Safety option, contact the Department of Administration of Justice and Public Safety, 816 West Franklin Street.

Minor in Administration of Justice and Public Safety

Select one course from each of the following groups: Group I—AJP 181, 252, 253, 254, or 255. Group II—AJP 260 or 324. The additional 12 hours are to be upper-division AJP courses agreed upon by the student and a faculty advisor in this department. In addition, a criminalistics (forensic science) minor is available to those students majoring in chemistry or certain other physical sciences. The forensic science minor requires the satisfactory completion of 18 credit hours of AJP courses and includes the following courses: AJP 260, 370, 380, 475, 571 and 492 or 493. A student interested in a minor in public safety should obtain specific course advising from the faculty member responsible for that program.

Master of Science in Administration of Justice

The graduate degree program in administration of justice is designed to provide advanced educational preparation for practitioners and students pursuing careers in the fields of criminal justice, juvenile justice, public safety, or forensic science. Such preparation includes understanding appropriate theoretical positions

and concepts, and developing necessary professional skills. The master's degree includes 36 or 39 semester hours. See the *VCU Graduate Bulletin* for a more detailed description of this program.

RECREATION, PARKS, AND TOURISM

CHARLES E. HARTSOE

Chairman of the Department

Patricia Brown Keith Ready
Karen Purcell Michael Wise
Ronald Reynolds

Adjunct Faculty—

George Benford Harry Thompson
Robert Ramsey Allan Williams

The basic objective of the Department of Recreation, Parks, and Tourism is to prepare the student for middle management, planning, and program positions in one of four areas of concentration: recreation and park management, recreation program and leadership, therapeutic recreation, and travel and tourism.

The department offers a Bachelor of Science degree in recreation, parks, and tourism. Graduates may find career opportunities in a variety of municipal, state, and federal park, recreation, and tourism programs; and private and commercial recreation developments and clubs. The student is prepared to pursue graduate study in the field of recreation at a number of major universities.

Students take the community and public affairs curriculum program in the first two years. Those who expect to major in recreation should take REC 195 Recreation Leadership, REC 261 Recreation, Parks, and Tourism in Modern Society, and REC 303 Leisure Delivery Systems, as electives in their first two years. If they have not done so, they will have to include them in their third year.

For the Bachelor of Science degree in recreation, parks and tourism a minimum of 123 semester hours, including the recreation internship, is required. While a maximum of 53 credits in recreation may be presented for the baccalaureate degree, courses beyond 48 credits must be approved by the advisor. This will permit students to develop some specialization in areas beyond their selected option.

In addition upper-division directed electives approved by the advisor are required within each option. These courses may come from more than one department. Departments with courses acceptable as directed electives for recreation

majors include business administration and management, biology, crafts, administration of justice, education, rehabilitation services, psychology, sociology, social work, and urban studies.

Major in Recreation, Parks, and Tourism

All students seeking a baccalaureate degree within the Department of Recreation, Parks and Tourism are required to fulfill the following course requirements in addition to general curriculum requirements.

Requirements for all majors (35 hours)

REC 195	Recreation Leadership
REC 261	Recreation, Parks, and Tourism in Modern Society
REC 303	Leisure Delivery Systems
REC 320	Recreation Analysis
REC 331	Recreation Site Selection and Analysis
REC 395	Recreation Program Development
REC 403	Management of Recreation, Parks, and Tourism Agencies
REC 404	Revenue Sources for Parks and Recreation
REC 490	Seminar: Recreation
REC 493	Internship

Directed electives (12 hours) from supporting disciplines are to be scheduled during the junior and senior years.

Requirements by program options:

Recreation and Park Management (13 hours)

REC 332	Recreation Site Design and Development (2)
REC 332L	Recreation Site Design and Development Laboratory (2)
REC 465	Park Operations and Maintenance (3)
REC Electives—6 hours	

Recreation Program and Leadership (13 hours)

REC 200	Outdoor Recreation (3)
REC 200L	Outdoor Recreation Skills (1)
REC 431	Advanced Recreation Facilitation Techniques (3)
REC electives—6 hours	

Therapeutic Recreation (12 hours)

REC 371	Recreation for Special Populations (3)
REC 472	Recreation Programs for Special Populations (3)
REC 476	Leisure Counseling (3)
REC 506	Issues in Therapeutic Recreation (3)

Required nonrecreation courses

BIO 205	Basic Human Anatomy (4)
BIO 206	Human Physiology (4)

Travel and Tourism (12 hours)

REC 341	Introduction to Travel and Tourism (3)
REC 442	Management of Group Travel (3)
REC 445	Conference and Convention Planning (3)
REC electives—3 hours	

Minor in Recreation, Parks, and Tourism

Students desiring a minor in recreation, parks, and tourism will be required to complete REC 195, 261, 303, and 395.

A total of 18 hours for a minor are required and an additional six hours of recreation courses to be selected with the assistance and approval of an assigned advisor.

Master of Science in Recreation, Parks, and Tourism

The purpose of the graduate program in recreation, parks, and tourism is to prepare administrators, supervisors, and other personnel for specialized or advanced responsibilities in public, quasi-public, and private agencies engaged in providing recreation, park and tourism services and programs. The master's degree in recreation requires a minimum of 36 semester hours of graduate study, including a thesis or research project. The areas of concentration include leisure service management, recreation and tourism planning, and therapeutic recreation. See the *VCU Graduate Bulletin* for a more detailed description of this program.

REHABILITATION SERVICES

RICHARD E. HARDY

Chairman of the Department of Rehabilitation Counseling
GERALD L. GANDY

Director of the Undergraduate Program in
Rehabilitation Services

Ann L. Chandler
George R. Jarrell
Marcia J. Lawton
E. Davis Martin, Jr.
Keith C. Wright
Adjunct Faculty—

Cynthia Barnes
Paige E. Berry
Katherine Brown
Carolyn Chapman
Jennings G. Cox
Lenore Gay
Jay A. Maynard
Elizabeth R. Miller
Mary Moyer
M. Teresa Mullin
Joan Pazera
Bonita Pennino Smith
Richard H. Welles

Robert A. Lassiter
(Professor Emeritus)
Richard S. Luck
Warren R. Rule

Joseph Bauserman
Lily Bess
JoAnn P. Chabot
Carl Collier
Patricia Franco
Mary Jencik
William McAllister
Jon S. Montgomery
Ronald Moyer
Joanna Newman
Dorothy Petraitis
J.I. Wainwright
L. Timothy Whitmore

The Department of Rehabilitation Counseling was established in 1955 to provide graduate education in the professional field of rehabilitation counseling. The department offers a Master of Science in rehabilitation counseling for both

full- and part-time students. It also provides advanced education for persons presently employed in agencies and facilities offering services to handicapped persons. In 1974 the undergraduate program in rehabilitation services was established to provide a broad general rehabilitation education background for students at the undergraduate level. Undergraduate study in this department leads to a Bachelor of Science degree in rehabilitation services.

Bachelor of Science in Rehabilitation Services

The Bachelor of Science program in rehabilitation services is designed to provide a background appropriate for dealing effectively with the problems of various disabled and disadvantaged client groups. It is possible to obtain a combination of the following skills and knowledge: (1) an understanding of disability and its attendant disadvantages; (2) interviewing and interpersonal helping relationships; (3) rehabilitation case study methods; (4) community organization and dynamics; (5) work evaluation and adjustment; (6) job development and placement; (7) manpower services; and (8) alcoholism and drug services.

Although opportunities for specialization exist, the emphasis of the curriculum is toward a broad interdisciplinary education relevant to positions involved with the effective development of human potential and ability. Possible employment opportunities could include intake interviewing and screening, community outreach and case development activity, work evaluation and adjustment, counseling under supervision, job development and placement, case management and coordination of services, client advocate promotion and public relations work, human resources planning, and program development.

Institutional employment possibilities include organizations or agencies, private or public, concerned with physical disability, developmental disabilities, crisis intervention, mental illness, geriatrics, corrections, drug addiction, alcoholism, employment, manpower development, manpower planning, community-based youth employment, recreation, etc. Such organizations might include the Virginia Department of Rehabilitation Services, the Veterans Administration, the Commission for the Visually Handicapped, the Employment Security Commission, Goodwill Industries, Community Ac-

tion programs, Comprehensive Employment Training programs, United Givers agencies, hospitals, clinics, sheltered workshops, recreation programs, etc.

The Bachelor of Science in rehabilitation services includes the choice of two options: General Client Services Option and Alcoholism and Drug Services Option. A total of 123 credit hours of study is required for the completion of the degree. Forty-five credit hours of upper-division courses are required. No more than 45 credit hours can be taken in rehabilitation services courses.

The General Client Services Option involves a broad rehabilitation educational background emphasizing direct therapeutic contact with clients with various disabilities. A total of 30 credit hours in rehabilitation services courses is required. An additional 12 credit hours is required in rehabilitation services elective courses and/or other social and behavioral science cognate courses of either a basic or applied nature. Students may want to consider a concentration in either vocational evaluation and work adjustment or manpower to meet their cognate requirement. It is recommended that students take Psychology 101 and Sociology 101 in their first two years.

The Alcoholism and Drug Client Services Option involves a specialization in alcoholism and drug rehabilitation. A total of 30 credit hours in rehabilitation services courses is required. An additional 12 credit hours is required in rehabilitation services elective courses and/social and behavioral science cognate courses of either a basic or applied nature (Rehabilitation Services 465 Basic Alcoholism and Drug Case Management, Psychology 304 Developmental Psychology, and Pharmacology 448 Drug Dependence: Sociological and Pharmacological Aspects should be included in this 12-credit-hour requirement). It is recommended that students take Psychology 101 and Sociology 101 in their first two years.

Other social and behavioral science courses of either a basic or applied nature could include courses in administration of justice and public safety, business administration, economics, education, political science, psychology, public administration, recreation, social work, sociology, urban studies, etc. It is possible to obtain a minor in most of these areas. Rehabilitation Services elective courses are those REH courses which are not part of a student's required pro-

gram. Students should consult their advisors regarding specific courses more appropriate to their goals and interests.

Major in Rehabilitation Services

General Client Services Option

- REH 201 Introduction to Rehabilitation Services
- REH 202 General Alcohol and Drug Studies
- REH 312 Contemporary Rehabilitation Services
- REH 350 Applied Rehabilitation Methods
- REH 360 Work Evaluation and Adjustment in Rehabilitation
- REH 370 Job Development Placement
- REH 456 Interpretative Processes in Rehabilitation
- REH 495 Practicum in Rehabilitation (6 credits)
- REH 539 Current Problems in Rehabilitation
- REH and/or Cognate (Social and Behavioral Sciences) Elective (12 credits)

Alcoholism and Drug Client Services Option

- REH 201 Introduction to Rehabilitation Services
- REH 202 General Alcohol and Drug Studies
- REH 312 Contemporary Rehabilitation Services
- REH 321 Introduction to Alcoholism and Drug Abuse
- REH 322 The Growth Process of the Alcoholic and Drug Addict
- REH 452 Crisis Intervention with the Alcoholic
- REH 494 Practicum in the Rehabilitation of the Alcoholic (6 credits)
- REH 523 Principles, Methods, and Techniques in Treatment of the Alcoholic
- REH 551 Treatment of the Alcoholic with Significant Others
- REH and/or Cognate (Social and Behavioral Sciences) Electives (12 credits)

Minor in Rehabilitation Services

A minor in rehabilitation services will require the completion of 18 hours of study. Three of these credit hours should be in REH 201. The remaining 15 credit hours can be taken in any rehabilitation services courses. Students should consult an advisor in the department regarding courses which would be appropriate to their needs and interests.

Master of Science in Rehabilitation Counseling

The Master of Science program in rehabilitation counseling is a graduate-level specialization designed to prepare an individual to meet the requirements necessary to become recognized as a professional rehabilitation counselor. In addition to the development of a broad understanding of human behavior, techniques of individual and group counseling, vocational appraisal and adjustment, caseload management, and use of community resources in facilitating the rehabilitation of mentally, emotionally,

socially, and physically handicapped persons are stressed. Employment opportunities include state/federal rehabilitation programs and public and private agencies. See the *VCU Graduate Bulletin* for a more detailed description of this program.

URBAN STUDIES AND PLANNING

ALLEN FONOROFF

Chairman of the Department

Morton B. Gulak

Gary T. Johnson

Peter Schulz

Carroll R. Hormachea

John V. Moeser

Robert D. Rugg

Christopher Silver

Adjunct Faculty—

Frederick M. Bruner

Suzette Denslow

Daniel Gallagher

Jean Gregory

Frank Jewell

Kenneth W. Poore

Robert A. Carter

F. Rurik Ekstrom

Bruce Gould

Ralph Higgins

Patrick W. McCrerey

James A. Willett

The City

Today, nearly 80 percent of the American people live and work in metropolitan areas. The city has become man's center for commerce, industry, the arts, and social interaction. It is a place where a great many people are involved in a great variety of activities. The city is a crowning achievement of civilization and urbanization and has been the means for the development and maintenance of our present society.

Such an intense concentration of human activity is not without its problems: racial discrimination, poverty, substandard housing, traffic congestion, crime, and pollution. Urban governments are ill-equipped to handle these problems because, among other reasons, the available financial resources are decreasing at a time when the needs for municipal services are increasing.

In response to these unpleasant aspects of modern city life, too many city dwellers are moving to the suburban periphery where they have access to the city's resources and shelter from its problems. More than half of the urban population now resides outside the central city. Much commercial, industrial, and recreational activity has also decentralized. The urbanizing suburbs are now beginning to experience the problems of the central city. There is a growing realization that urban problems do not respect boundary lines, the issues are metropolitan in scope and cannot be avoided.

Career Opportunities

Opportunities exist in a wide variety of fields for urban studies graduates. Our recent graduates, those who chose work over graduate or professional school, have found useful and meaningful employment in a number of public agencies and organizations, including planning commissions, housing authorities, community development departments, transportation firms, social welfare agencies, and a variety of private organizations. Most students who chose graduate school have been accepted to first-rate institutions, enrolling in programs in architecture, planning, law, public administration, business administration, and other majors in the social and behavioral sciences.

The student with a Bachelor of Science degree in urban studies has acquired those skills needed to succeed in graduate school or in the search for satisfying employment.

The Urban Studies Program

The program in urban studies at VCU is designed to familiarize the undergraduate with the metropolis (and the benefits achieved through its growth and development); the social science perspective applied to urban problems; and the development of plans and administration to produce a more livable environment.

The major is designed to provide students with an intellectual understanding of the urban phenomenon in a practical setting and with sufficient methodological skills to undertake entry-level responsibilities in public and private organizations dealing with the issues of urbanization. The program does not seek specifically to develop an occupational identity with requisite professional skills.

To accomplish these objectives, eight courses are required of all majors. These courses address basic knowledge across the field of urban studies, including political, economic, and social functions and interactions, the process of planning, research, urbanization, and policy-making.

The student is able to choose a concentration in planning, public policy and social change, environment, information, or public management. The Richmond metropolitan area is the made-to-order laboratory for the program, and action-oriented students are constantly challenged by the potential of relevant research and community involvement. These concentrations

provide students with greater choices for more detailed study. The student may also decide upon a generalized course of study.

The urban studies program is distinctly interdisciplinary in nature. Faculty members represent the following disciplines and professions: planning, geography, political science, law, urban studies, history, economics, architecture, and sociology. In addition, supporting urban studies courses are taught by faculty members from other departments within the School of Community and Public Affairs and the university. Students can structure their program of studies to fit individual goals. Intensive participation in curriculum and program planning by urban studies majors is not only encouraged but solicited.

The most significant distinctions of the urban program are

1. A subject that deals with the real contemporary world and
2. An opportunity to become directly involved in the community by working with existing problems through field work within various courses, especially the internship. The fieldwork provides further opportunity to develop skills as well as a transition between academic life and post-baccalaureate work life.

The curriculum is divided into various concentrations of study and a general area of urban studies.

Environmental Concentration

The concentration in environmental studies will expose students to natural science fields that are significant for understanding the physical environment of cities, presenting the effects of urban population and land uses on the physical environment, introducing human response to environmental hazards and conditions in a behavioral context, and identifying alternatives for public management of interactions between man and environment. The assumptions of the concentration are (1) that entering students will have a minimum background in physical science subjects including those required in the CSE core, and (2) that students completing the concentration will require further experience, either on the job or in graduate studies, before qualifying for professional work. Thus, the overall objective of the concentration is to introduce the field of environmental management planning to

those urban studies majors who may wish to orient their future experience in this direction.

Information Systems Concentration

A concentration in information systems within the urban studies major is designed for students interested in urban services and planning careers. This curriculum will provide additional training in computerized information systems.

Without having to fulfill lower-division requirements of the School of Business, students may nevertheless receive a background in information systems comparable to that of an information systems major and may be eligible to sit for examinations for Certificate in Data Processing and/or Registered Professional Programmer.

Planning Concentration

Planning can be defined as a rational approach to decision-making. Urban and regional planning is intended to make it possible to evaluate proposals for physical, social, and economic development against a backdrop of a comprehensive view of the future. To be useful, such a comprehensive view must be realistic—politically, financially, and administratively.

Thus, the planning concentration and the courses listed below are designed to provide general information about the profession, the subject matter of planning, the theory of planning, and its application to urban problems.

Public Policy and Social Change Concentration

The growth of American urban communities is to a large extent the result of public policy. Whether the policy is aimed explicitly at urban areas or whether the policy only indirectly affects urban areas is less important than the fact that laws made at all three levels of government do influence the physical, social, and economic character of the metropolis. For this reason, a concentration devoted to the study of public policy (how it is made, its implementation, its impact) is central to an undergraduate urban studies curriculum. Moreover, since the study of urban areas includes a focus on social inequality, a knowledge of public intervention aimed at improving social conditions is essential.

Most students, upon graduation, will either work in government or for a private agency

whose budget and programming are largely shaped by government. Consequently, packaging courses in a fashion that provides students with an understanding of the political environment and community ethos in which they will work, the administrative machinery (including government budgeting procedures), and government policy as it affects such matters as social interaction, housing, and transportation, provides an integrated education that is both broad and focused.

Public Management Concentration

The activities carried out by a public manager are pivotal to a city's administration. Unless they are performed with some efficacy, other activities are jeopardized. Strikes of city policemen, firemen, and garbage collectors are accompanied by arson, theft, riots, disease, and filth. Similarly, breakdowns in public utility services bring normal life to a halt. In crises, people look to urban managers and expect a quick and sure response.

In preparation for this career, the public management concentration achieves an understanding of management tools and relates these tools to fiscal areas and political boundaries of government. Emphasis is placed upon the manager as a public decision-maker. Special attention is placed upon the concepts and practices of management, evaluation, policy analysis, governmental fragmentation, and budgeting. The concentration will prepare the student for entry-level positions in government or graduate study in the public management area.

Requirements for the Urban Studies Major

The Bachelor of Science in urban studies requires the completion of a minimum of 123 credit hours of study. The program is designed so that students may enter as late as their junior year.

Students are allowed to enroll in most 500-level courses but should consult their advisor before registering to secure permission of the instructor.

All students may apply for participation in the Urban Internship Program which provides an opportunity to work within the Richmond area on urban and regional problems. In general students may not exceed 45 credit hours of urban studies courses. However, those students who choose a specific concentration and wish to participate in the internship may exceed this

maximum by six credit hours.

All students must successfully complete the following courses:

USP 302	Land Use Capability
USP 304	Urban Social Systems
USP 306	Urban Economic Base or
USP 321	Urban Economics
USP 310	Introduction to Public Planning
USP 313	Urban Research
USP 322	Urban Finance
USP 440	Senior Seminar: The Good City
USP 511	Urban Public Policy-Making Processes

All students must also successfully complete one course from the concentration in environment, one course from the concentration in planning, and two courses from the concentration in public policy and social change. These courses are

Environment (choose one)

USP 331	Environmental Systems
USP 332	Environmental Management

Planning:

USP 433	Comparative Urban Experiences in the United States
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Public Policy and Social Change:

USP 413	Public Implementation
USP 512	Metropolitan and Regional Public Management

To complete a concentration, all students must successfully complete three additional courses within each concentration. The concentration in information systems requires four courses. All courses marked with an (*) are required for that concentration. For those students pursuing a generalized course of study, as well as those within specific concentrations, electives must be selected with the assistance of a faculty advisor so that individual programs will form a coherent body of knowledge in urban studies.

Environment

*USP 331	Environmental Systems
*USP 332	Environmental Management
USP 333	Energy and Conservation
USP 493	Internship
USP 515	Cartography and Air Photo Interpretation
USP 581	Land Use and Site Planning

Information Systems

*USP 514	Cartography and Planning Graphics
*BUS 260	Information Systems Concepts
*BUS 361	Systems Analysis
*BUS 365	Systems Design

Planning

USP 433	Comparative Urban Experiences in the United States
USP 493	Internship
USP 515	Cartography and Air Photo Interpretation

USP 522	Programming and Budgeting
USP 540	Historic Preservation in Planning
USP 552	Urban Transportation
USP 561	Housing and Development Policy
USP 571	Introduction to the Study of the Future
USP 581	Land Use and Site Planning

Public Policy and Social Change

USP 245	Housing and Community Revitalization
USP 337	Urbanization and Blacks
*USP 413	Policy Implementation
USP 493	Internship
*USP 512	Metropolitan and Regional Public Management
USP 522	Programming and Budgeting
USP 552	Urban Transportation
USP 561	Housing and Development Policy

Urban Management

*POS 331	Public Administration
*USP 413	Policy Implementation
*USP 512	Metropolitan and Regional Public Management
*USP 522	Programming and Budgeting

Open Electives

USP 116	Introduction to Urban Studies
USP 340	Urban Habitat
USP 350	Culture and Urbanism in Great European Cities
USP 391	Topics in Urban Studies
USP 392	Independent Study
USP 493	Internship
USP 513	Planning Graphics
USP 514	Computer Mapping
USP 515	Cartography and Air Photo Interpretation
USP 516	Computerized Planning Information Systems

Minor in Public Management**

The minor in public management is designed to develop up-to-date administrative skills and analytic capabilities to qualify students for careers in management and personnel administration.

The minor provides an overview of the field of public management in the context of political realities relying on planning and decision-making.

The public management minor consists of 18 upper-level credits. All students must take the following courses:

POS 331	Public Administration
POS 334	Public Personnel Administration
USP 413	Policy Implementation
USP 522	Programming and Budgeting

In addition, two of the following electives are required:

POS 429	Intergovernmental Relations
POS 432	Public Bureaucracy
USP 512	Metropolitan and Regional Public Management

** Courses used for the minor may not be counted for the major or a concentration.

Urban Studies students who minor in Public Management are required to take USP 245 and one other course under the Concentration in Public Policy and Social Change.

Substitutions will be arranged with the assistance of the student's advisor.

Minor in Urban Studies

For a minor in urban studies for a student outside the School of Community and Public Affairs, the following nine credit hours are required: CSE 315, 316, and USP 116. An additional nine hours of USP electives are to be taken with the advice and consent of an advisor in this department.

Minor in International Studies

CHRISTOPHER SILVER
Coordinator

The minor in international studies is designed to increase students' awareness of and sensitivity to the values, traditions, and aspirations of people in other parts of the world and to provide comprehensive knowledge of a specific geographical location. This program, coordinated by the Department of Urban Studies and Planning, will enable students to earn a minor in international studies while completing departmental, school, and university requirements for a B.A. or B.S. degree. The insights offered by the wide variety of disciplines which focus on an international perspective are intended to enhance the minor.

A secondary field of concentration beyond the major may be developed by combining general courses in international studies with either a focus on a geographical area or study in a global issues track. At present, students may specialize in one of five world regions, including Africa, Latin America, the Middle East, Russia and Eastern Europe, and Western Europe.

Two core courses have been developed for the international studies minor. "The Urban Habitat" will explore the evolution and current state of cities in a multinational, multicultural context. "Seminar in Global Issues" will enable students to bring the methodology and subject matter of their major to bear on a selected global issue or problem, such as world hunger, through individual research. All other requirements and electives in the international studies program will be drawn from existing courses in several departments.

Requirements

The minor in international studies consists of 18 credit hours. Students will frequently be able to count at least one course from general education requirements toward the minor. Courses taken for the minor are distributed as follows:

1. Core courses
INT 340/USP 340 the Urban Habitat
INT 490 Seminar in International Studies
2. Focus courses, following either the geographical area track or the global issues track. 12 credits.
Geographical area track
3 credits from ECO 315*, ECO 329*, BUS 418, POS 361, POS 362; 9 credits from the approved list of courses with at least 3 credits each from courses in humanistic disciplines and in the social sciences.
Global issues track
6 credits from POS 202, 203, 361, 362, 468 (at least three of these credits from an upper-level course); 3 credits from ECO 315*, ECO 329 or BUS 418; 3 credits from the approved list of courses.
*ECO 201-202 required as a prerequisite.

A list of geographical area focus courses and other approved courses for international studies may be obtained from the international studies minor coordinator.

In addition, students must demonstrate proficiency in a foreign language through the intermediate level, as determined by the Department of Foreign Languages.

The international studies minor coordinator serves as the student advisor, working closely with other faculty in appropriate departments, and provides the approval necessary to show that the minor has been successfully completed. Students should work with their international studies minor advisor in setting up their program of study.

URBAN AND REGIONAL PLANNING

The Master in Urban and Regional Planning (M.U.R.P.) was established in 1973 to provide graduate education in urban and regional planning. The central concern of this program must be people. The mission of a professional urban and regional planning program is to instill in student planners the sensitivities and perspectives, coupled with the tools, to enable them to help fashion humane urban environments. Such environments—manifesting the needs and aspirations of their inhabitants—must be created within a coherent framework of social and economic development to provide the broadest range of opportunities for individuals to meet their aspirations.

Thus the graduate program in urban and regional planning has four major goals:

1. To provide a broad but intensive background in the dynamics of urbanization with particular attention to the anticipation of future consequences of existing urban conditions.
2. To provide a rigorous professional grounding in the theory and methodologies of planning with emphasis on defining the role of planning and problem solving: their capabilities as well as their limitations.
3. To provide the opportunity to gain extensive knowledge in a specialized area of planning. Concentrations include both area levels of specialization: urban (small area) or regional (large area); and topical "options: land use and environmental planning, community services planning, urban and regional economic development, and health planning. In addition, a specialization in recreation planning may be developed through advising."
4. To produce a graduate planner who can combine theoretical learning with practical experience by providing within the curriculum a balance between classroom experience and actual field experience in meeting the types of problems encountered as a professional planner.

See the *VCU Graduate Bulletin* for a more detailed description of this program.

MINOR AND CERTIFICATE IN ENVIRONMENTAL STUDIES (ENS)

DAVID W. HARTMAN

Coordinator

Faculty affiliated with the Environmental Studies Program are

Charles Blem (Biology)	James Gates (Biology)
Robert Fisher (Biology)	Julie Honnold (Sociology and Anthropology)
David Hartman (Sociology and Anthropology)	John Mandeli (Mathematical Sciences)
Marijean Hawthorne (History and Geography)	Lynn D. Nelson (Sociology and Anthropology)
Husain Mustafa (Political Science)	Mark Overvold (Philosophy and Religious Studies)
John Pagels (Biology)	Keith Ready (Recreation, Parks and Tourism)
Robert Rugg (Urban Studies and Planning)	Leonard Smock (Biology)
Billy Sloope (Physics)	Ann Woodlief (English)
Peter Schultz (Urban Studies and Planning)	
Stuart J. Silvers (Chemistry)	

Environmental crises and discussion of environmental issues are central features of modern industrial societies. Continuing technological development and economic growth demand in-

creased public understanding of environmental constraints and the effects of human activity on the environment. When environmental questions are explored in depth, scientific knowledge, policy considerations, and ethical issues are necessarily joined. The curriculum in environmental studies is structured to provide a multidisciplinary introduction to biophysical and social factors which affect the quality of life on earth.

The minor and the certificate programs seek to furnish both broad and specific educational benefits. The minor in environmental studies provides an overview of the field which offers an intrinsically interesting way for many students to organize elective course work while gaining knowledge important to life in the contemporary world. When combined with an appropriate major, an environmental studies minor can be useful to students planning careers in any area concerned with environmental process and problems. The environmental studies certificate can help prepare students for work in such fields as industrial pollution control, municipal water treatment, environmental planning and analysis, biological monitoring, and science writing and reporting. The minor and the certificate programs should also be valuable to those who expect to study at the graduate level in such concentrations as ecology and environmental systems.

The minor in environmental studies shall consist of 21 credits, 18 of which must be outside the student's major department. A minimum of 12 credits must be taken at the upper level (300-400). Students minoring in environmental studies must also complete STA 213 Introduction to Statistics or CSE 242 Methods of Community Analysis. Required and approved courses for the minor are as follows:

Required Courses:

- ENS 490 Seminar in Environmental Studies
- BIO 315⁴ Man and Environment
- or
- BIO 317 Ecology

At least one of the following five courses:

- ANT 342 Cultural Ecology
- ECO 308 Economic Geography
- GEO 102 Introduction to Cultural Geography
- SOC 355 Natural Resources and Society
- USP 331 Environmental Systems

Additional Approved Courses

At least one natural science course and at least one social science course must be taken from the following list.⁵

- BIO 307 Aquatic Ecology
- BIO 332 Environmental Pollution
- BIO 432 Biology of Polluted Waters
- BIO 431 Introduction to Marine Biology
- BIO 514 Advanced Freshwater Ecology
- BIO 518 Plant Ecology
- EAS 411 Oceanography
- ENS 491 Topics in Environmental Studies
- ENS 493 Environmental Studies Internship
- GEO 203, 204 Physical Geography
- GEO 311/ANT 311, 312 History of Human Settlement
- PHY 105 Physical Geology
- PHY 315 Energy and the Environment
- POS 311 Politics of the Environment
- REC 331 Recreation Site Selection and Analysis
- USP 302 Land Use Capability
- USP 332 Environmental Management
- USP 333 Energy Conservation and Planning
- USP 415 Air Photo and Remote Sensor Interpretations

Approved laboratory credits:

- BIO L317 Ecology Laboratory
- GEO L203, L204 Physical Geography Laboratory
- REC L331 Recreation Site Selection and Analysis Laboratory

Certificate in Environmental Studies

A certificate in environmental studies will be awarded to students who complete the requirements for a minor in environmental studies, an additional nine credits of approved upper-level environmental studies course work, and one of the following four courses in applications of statistics: PSY 214, SOC 214, STA 214, or STA 543. Courses may be counted toward both a student's major and the environmental studies certificate. A minimum grade-point average of 2.0 must be achieved in environmental studies course work for the certificate.

Center for Public Affairs

GARY JOHNSON

Director

CARROLL HORMACHEA

Program Officer

MAUREEN HECK

Assistant to the Director
for Continuing Education

In 1978, Virginia Commonwealth University established the Center for Public Affairs as a unit within the School of Community and Public Affairs. The center is designed to provide university-based assistance to federal, state, and local government and other publicly-oriented

⁴Students may not take both BIO 315 and 317 for environmental studies credit.

⁵Selected topics courses offered by various departments may also be approved.

organizations through applied research, continuing education and training, and technical assistance. It operates from a multidisciplinary knowledge and skill base in addressing areas of particular interest to the public, emphasizing the delivery of responsive, practical, and cost-effective service.

The center's programs focus both on general public management concerns (such as productivity, personnel practice, and financial management) and on the needs and content area of specific organizations (such as recreation, human resources, and public safety). Participants in many continuing education programs may earn Continuing Education Units (CEUs).

The center does not grant degrees, but does work closely with academic departments. Faculty members from a variety of schools and departments work with the center; student involvement through employment and individual or class projects is encouraged as opportunities are developed.

COURSES IN COMMUNITY AND PUBLIC AFFAIRS (CSE)

211, 212 Social Problems and Prospects. Semester courses; 3 lecture hours. 3-3 credits. A preliminary analysis of the major social problems confronting our urbanized communities and the actions necessary for their solution. Income maintenance, public safety, and leisure will be the topics of study during the first semester. The second semester will include housing, employment, and health care.

241-242 Methods of Community Analysis. Continuous course; 3 lecture hours. 3-3 credits. Prerequisites: MAT 101, MAT/BUS 111. First semester considers descriptive cartographic and statistical techniques employed in community analysis; second semester advances to techniques which imply a relationship between variables in a community. It addresses sampling, hypothesis testing, correlation, and regression analysis while introducing the student to computer processing.

271 Metropolitan Studies Seminar. 2 lecture hours weekly for nine weeks; 300 clock hours in a public service agency. 3 credits. Prerequisite: permission of instructor. A weekly small group seminar for students employed in public service agencies. Generalizes the particular experience of the student in one agency to knowledge of public service career options. Emphasizes professional roles and patterns or organization in human service agencies.

315 The Evolution of American Cities. Semester course; 3 lecture hours. 3 credits. A general survey of how cities developed in the United States and the factors which contributed to the process of urbanization. Emphasis is placed on the public attitudes and values that have dominated particular periods of history and how these values affected the efforts to urbanize. The American city is examined as a vital force in the economic, social, and political development of modern America, as the major location for conflict between people of

all persuasions, and as the home of much of what is meant by American "civilization."

316 Urban Life in Modern America. Semester course; 3 lecture hours. 3 credits. Examines how a modern city functions, the public services rendered within the city, and the impact of public policy on the city. The city is treated as a system consisting of economic, social, and political activities which influence and are influenced by the physical/demographic environment. Each activity is studied separately with the cause-effect relationships among the activities highlighted by an analysis of public service delivery and, more generally, urban public policy.

COURSES IN ADMINISTRATION OF JUSTICE AND PUBLIC SAFETY (AJP)

181 Justice System Survey. Semester course; 3 lecture hours. 3 credits. Comprehensive overview of the administration of justice; assesses the extent of crime; reviews law enforcement, judicial, and correctional processes at all levels of government; discusses history and philosophy of public safety; evaluates career opportunities.

245 Introduction to Concepts of Public Safety. Semester course; 3 lecture hours. 3 credits. Comprehensive overview of theories of public safety; assesses the extent and impact of the accident and loss problem; reviews transportation systems and hazards and considers fire protection, and occupational industrial safety programs in both the private and public sectors; discusses history, philosophy, and practice of safety measures; and evaluates career opportunities and specific community responsibilities for safety.

252 Introduction to the Juvenile Justice System. Semester course; 3 lecture hours. 3 credits. This survey course studies all segments of juvenile justice and special procedures designed for young persons; recognizes the importance of proper handling of the juvenile by the police and the courts; reviews recent developments in juvenile rehabilitation. Required of all students in juvenile justice.

253 Introduction to Corrections. Semester course; 3 lecture hours. 3 credits. A survey of societal responses to the offender; traces the evolution of practices based on philosophies of retribution, punishment, and rehabilitation; reviews contemporary correctional activities and their relationships to other aspects of the criminal justice system; introduces the emerging area of correctional programming within the community. Required of all students in corrections.

254 Introduction to Law Enforcement. Semester course; 3 lecture hours. 3 credits. A survey of different facets of law enforcement including the activities of public police agencies and private security organizations. Assesses changes in law enforcement philosophy and practices, police relationships with the public and the political arena, and anticipated future trends in policing. Required of all students in law enforcement.

255 Introduction to Legal Studies. Semester course; 3 lecture hours. 3 credits. Overview of the American legal system, processes, terminology; analysis of historical and philosophical bases of law. Examines the systems that adjudicate criminal and civil law; considers the role of law in the functioning of the justice system. Required of all students in legal studies.

260 Criminal Law. Semester course; 3 lecture hours. 3 credits. Deals with the definitions and processing of sub-

stantive offenses along with the bases of criminal liability, defenses, and complicity. Covers the scope of individual rights under due process, emphasizing arrest, interrogations, search, and seizure.

305 Enforcement Theories and Practice. Semester course; 3 lecture hours. 3 credits. An overview of the nature and application of law enforcement theory. Examines the theoretical underpinnings of a variety of law enforcement practices, with emphasis on evolving trends.

310 Industrial and Retail Security. Semester course; 3 lecture hours. 3 credits. The organization and management of industrial security and plant protection units; security, police, administrative, legal, and technical problems; special problems of government contract security; survey of specialized programs in retail security; insurance and credit investigation; transportation security; private guard and alarm service; regulatory and licensing agencies.

315 Traffic Planning and Management. Semester course; 3 lecture hours. 3 credits. Contemporary and future problems of traffic, accident investigation, and traffic regulation; enforcement direction, pedestrian, intersection, and parking control; records and analysis; selective enforcement; engineering and education. Traffic law and court procedure.

324 Courts and the Judicial Process. Semester course; 3 lecture hours. 3 credits. Examines the systems that adjudicate criminal and civil law; includes constitutional authority, jurisdictions, and trial processes, with particular emphasis on reform in court administration, disposition without trial and sentencing.

330 Safety Codes, Standards, and Regulations. Semester course; 3 lecture hours. 3 credits. A study of the federal and state standards, codes, and regulations with particular emphasis on application of these standards, codes, and regulations for work environments, employments, and personnel administration.

342 Public Safety in the Changing Community. Semester course; 3 lecture hours. 3 credits. Examines the current issues, problems, and trends affecting public safety. Emphases will be placed upon studying varying approaches and methods for identifying and solving specific community safety problems. Students will become familiar with public pressures concerning safety, legislation impacting upon the field, and relationships among government, employers, and citizens, as these influence loss reduction.

344 Accident Prevention and Loss Control Management. Semester course; 3 lecture hours. 3 credits. An analysis of the principles and concepts relating to the identification and appraisal of occupational accidents and loss-producing conditions. Examines accountability, responsibility, authority, proper measurement of safety performance, and the various aspects of administering safety policies and practices especially with regard to the industrial work setting.

350 Evaluation and Treatment of the Offender. Semester course; 3 lecture hours. 3 credits. An analysis of the issues and procedures involved in evaluating individual differences in offenders and among classes of offenders; current diagnostic and treatment methods are discussed; introduces the student to case analysis and correctional counseling techniques. Includes analysis of evaluation and treatment resources external to corrections.

351 Community-Based Correctional Programs. Semester course; 3 lecture hours. 3 credits. A comprehensive review of various community-based rehabilitation and treatment efforts; includes analysis of probation, parole, work release, halfway houses, and other methods of reintegrating the offender into society.

352 Crime and Delinquency Prevention. Semester course; 3 lecture hours. 3 credits. Review and analysis of the problems associated with prevention of crime and delinquency, viewed in a total systems context. Programs and activities involving citizen, community, and agency interrelationships will be developed and examined. Students are responsible for preparing and evaluating projects with crime preventive goals.

355 Foundations of Criminal Justice Practice. Semester course; 3 lecture hours. 3 credits. An examination of the intellectual and historical underpinnings of the criminal justice system. This will include analysis of evolving values and ideas regarding social control, individual and collective responsibilities and rights, the role of punishment, politics and the law, practitioners as public servants, and criminological and other foundations of the criminal justice system.

358 Lawyer's Role in the Justice System. Semester course; 3 lecture hours. 3 credits. Examines the multiple responsibilities of lawyers from an historical and contemporary perspective. The basic techniques of the lawyer's craft will be studied with emphasis placed on case advocacy, negotiation skills and legal reasoning, and problem solving.

363 Correctional Law. Semester course; 3 lecture hours. 3 credits. Examines the legal rights of both the offender and the correctional worker. Attention is given to case law and legal decisions affecting policies and procedures in probation, correctional settings, and parole. Trends influencing correctional programming and management activities will be projected.

370 Scientific Research and Crime Analysis. Semester course; 3 lecture hours. 3 credits. A comprehensive evaluation of current developments in research, instrumentation, and laboratory technology utilized to detect, identify, analyze, and compare demonstrative evidence.

371 Fire Protection and Fire Safety. Semester course; 3 lecture hours. 3 credits. This course is designed to provide an in-depth analysis and critique of fire safety problems and the development of adequate protection and prevention measures. It addresses the chemistry and physics of fire, including the equipment and facilities required for modern fire protection, and places particular emphasis on factors required in performing fire safety audits and fire protection evaluations.

372 Fire Prevention and Emergency Planning. Semester course; 3 lecture hours. 3 credits. Emphasizes the principles and strategies of fire prevention and emergency planning with the major emphases on causes and effects of disasters, applicable regulations and standards, responsibilities for required services, comprehensive planning for all such events, and the importance of inspectional and enforcement efforts.

378 Juvenile Justice Law and Process. Semester course; 3 lecture hours. 3 credits. Examines the juvenile court as an institution: its jurisdiction and procedures. Considers intake, pretrial diversion, and hearings, as well as rights and liabilities of the delinquent, dependent, and neglected child.

Contrasts juvenile and adult law; projects future impact of the court.

380 Criminal Justice Research. Semester course; 3 lecture hours. 3 credits. Designed to familiarize the student with current and applied research activities in justice and public safety including the application of data processing to criminal justice. Analyzes research in criminal justice journals and government reports, enhances the capability to evaluate contemporary research. Students apply research techniques to specific topics and use research methods from professional fields.

394 Field Service in Criminal Justice. Semester course; 1 credit. Designed to provide the student with an opportunity to participate as a volunteer worker in a criminal justice agency. Offers actual experience as an agency volunteer while under supervision of a faculty advisor. May be taken three times for a total of three credits to substitute for internship requirements.

410 Security Administration. Semester course; 3 lecture hours. 3 credits. Examines topics related to the management of security personnel and activities. Emphasis is placed upon the planning and administrative aspects of an efficient system of security and the advantages gained by implemented and economical program against safety hazards, internal threats, and the many types of losses. The student will learn to conduct security surveys, plan for security systems, and understand administrative responsibilities for safety and protection matters.

415 Industrial Safety Engineering. Semester course; 3 lecture hours. 3 credits. An examination and appraisal of the physical hazards in the work environment including plant facilities, handling and storage of materials, machine safeguarding, electrical hazards, and personal protection. Reviews and analyzes the various processes established for implementing safety programs and procedures within industry.

420 Human Factors and Environmental Stresses. Semester course; 3 lecture hours. 3 credits. Study of the interface and relationships among human safety factors, machines, and their total environment. Special attention is given to various human factors and stresses as they contribute to and influence safety.

426 Legal Aspects of Highway Safety. Semester course; 3 lecture hours. 3 credits. Course covers the implications of the Uniform Traffic Code, the Model Traffic Ordinance, the Highway Safety Act of 1966, and the Motor Vehicle Laws of Virginia.

432 Criminal Justice: Organizations. Semester course; 3 lecture hours. 3 credits. Considers the behavioral dimensions of administrations in criminal justice and public safety agencies. Examines the concepts of leadership and decision making and the effect of environmental dynamics in the management of the criminal justice system.

433 Adult/Juvenile Correctional Administration. Semester course; 3 lecture hours. 3 credits. Reviews the development of theories and practices prevalent in contemporary correctional administration and management; encompasses the community safety, treatment, and custodial functions of all juvenile and adult correctional settings. Emphasizes the administrative, organizational, and legal factors which impact on program design, implementation, and operation.

434 Enforcement Administration. Semester course; 3 lecture hours. 3 credits. Examines major management concepts and principles with special emphasis on considerations of law enforcement. Policies and procedures formulated and followed by managers in law enforcement settings will be evaluated from a structural as well as a functional perspective. Contemporary and anticipated future problems, challenges and trends facing police managers will be addressed.

437 Accident Analysis and Crash Prevention. Semester course; 3 lecture hours. 3 credits. An analysis of the factors, implications, and methodology of safety and accident prevention; application of crash prevention programming; implications for transportation safety in the future.

440 Behavioral Factors in Highway Safety. Semester course; 3 lecture hours. 3 credits. Analyzes behavioral aspects of highway transportation safety, accident causation, and the utilization of behavioral science principles in the modifications of human behavior. Acquaints those involved in traffic safety administration with current safety-related research and its application. Emphasizes the role of stimulants and depressants in crash causation research.

462 Strategies for Delinquency and Crime Prevention. Semester course; 3 lecture hours. 3 credits. Course will examine current developments in crime and delinquency control and the challenges proposed by such developments. Assesses a variety of crime and delinquency prevention strategies and procedures for implementing them. Students will develop prevention objectives and work-action plans to reduce and prevent delinquency and crime.

463 Comparative Criminal Justice Systems. Semester course; 3 lecture hours. 3 credits. Study of national and international criminal justice systems with an emphasis on historical, cultural, and operational comparisons. Contemporary research relating to law enforcement, adjudicative, and correctional systems will be considered.

468 Economic Offenses and Organized Crime. Semester course; 3 lecture hours. 3 credits. Analysis of the types of offenses which occur in the business and governmental world, and the consequences of illegal practices. Primary attention will address the public sector through the methods utilized to detect and investigate criminal activities affecting governmental units. Relationships to organized crime will be described for each of the specific topics and techniques.

472 Risk Management in Fire Administration. Semester course; 3 lecture hours. 3 credits. Analyzes the risk management factors of fire hazards as determined through current administrative practices, procedures, and controls. Enables the student to understand how to minimize the loss of human, natural, and physical resources through prudent program assessment and direction.

457 Case Studies in Criminal Procedure. Semester course; 3 lecture hours. 3 credits. Analyzes case studies reflecting the supervisory role of the courts over the prosecutorial use of testimonial and nontestimonial evidence; examines by actual cases the judicial interpretive processes by which the public safety is balanced with individual rights.

480 Seminar: Critical and Career Issues in Criminal Justice. Semester course; 3 lecture hours. 3 credits. Analyzes contemporary questions relating to policies, goals, and developments throughout criminal justice; includes detailed

examinations of vital issues and emerging trends which promise to affect the future. Research papers are to be prepared on selected issues. Students will assess their own career capabilities, with special emphasis on available opportunities for holders of the degree.

491 Topics Seminar in Criminal Justice. Semester course; 3 credits. In-depth examination of selected administration of justice topics. Seniors with a GPA of 3.0 or above may substitute AJP 589 Seminar: Innovations in Administration of Justice.

492 Directed Individual Study. Semester course; 3 credits. Provides an independent study opportunity for the adult student who is (or was) employed in the criminal justice system and who does not require internship or volunteer experience. This course is also available to seniors with a 3.0 GPA (with permission of the department chairman) as a substitute for an elective options course.

493 Internship. Semester course; 3 or 6 credits. Field internship allows student to relate theory to practice through observation and experience. Must be performed in an approved agency under the supervision of the instructor.

COURSES IN RECREATION, PARKS, AND TOURISM (REC)

195 Recreation Leadership. Semester course; 3 lecture hours. 3 credits. Course provides a study of the theories of leadership, group dynamics, and human relationships used in recreation delivery systems. Students acquire and demonstrate practical skills in planning, organizing, leading, participating, and evaluating a wide variety of recreation activities selected from the basic areas of programming such as social recreation, music, dance, drama, arts and crafts, environmental-outdoor recreation, special events, sports and games, linguistics, and hobby clubs.

200 Introduction to Outdoor Recreation Activities. Semester course; 3 lecture hours. 3 credits. A basic introduction to the theory and practice of outdoor adventure recreation. Emphasis is given to knowledge and understanding of the theoretical and philosophical foundations of participation in outdoor adventure recreation programs. Students will be exposed to an experiential approach to learning. Through involvement with activities, students will develop skills in planning, administering, and evaluating outdoor adventure recreation programs.

201L Backpacking. Semester course; 2 laboratory hours. 1 credit. Prerequisite: REC 200. An introduction to backpacking. Utilizing lectures, readings, and hands-on experience, emphasis will be given to the skills and knowledge necessary for safe, low-impact, short-to-moderate-duration travel through backcountry areas.

202L Flatwater Canoeing. Semester course; 28 laboratory hours. 1 credit. Prerequisites: REC 200 and ability to swim. Introduction to flatwater canoeing. Utilizing lectures, readings, and on-the-water experience, emphasis will be given to the skills and knowledge necessary for planning and implementing flatwater canoe trips. Topics include safety, locations for trips, equipment, and portaging, as well as the issues of conservation and impact.

203L Whitewater Canoeing. Semester course; 2 laboratory hours. 1 credit. Prerequisites: REC 202L and ability to swim or permission of instructor. A basic introduction to whitewater paddling, utilizing lectures, readings, and on-the-

water experience. Emphasis will be given to the skills and knowledge necessary for planning and implementing whitewater canoe trips, including communication and the structure for leading group trips. Course is taught evenings and weekends as found in Schedule of Classes.

204L Rock Climbing. Semester course; 2 laboratory hours. 1 credit. A basic introduction to rock climbing, utilizing lectures, readings, and rock climbing experiences. Emphasis will be placed on safety, equipment, and conservation, as well as techniques of belaying, climbing, and rappelling. Attention is given to the importance of communication and personal feelings of mastery and success in outdoor adventure recreation. Course is taught evenings and weekends as found in Schedule of Classes.

261 Recreation, Parks, and Tourism in Modern Society. Semester course; 3 lecture hours. 3 credits. Introduction to the historical and philosophical foundations of leisure and recreation; implications of continued growth of the leisure phenomenon in contemporary society.

303 Leisure Delivery Systems. Semester course; 3 lecture hours. 3 credits. Evaluation of public, private, and commercial agencies that provide recreation services. Particular emphasis is given the types of leisure activities offered in relationship to the recreation market.

320 Recreation Analysis. Semester course; 3 lecture hours. 3 credits. Prerequisite: CSE 241-242. Examines various approaches to the study of leisure. Assesses the use of free time and the expenditure of time and money to fulfill leisure needs.

331 Recreation Site Selection and Analysis. Semester course; 3 lecture hours. 3 credits. An overview of the site selection and development processes will be analyzed as individual elements and the interrelationships among all the elements will be reviewed. Consideration will be given to the social, political, physical, and legal aspects of the park planning process.

332 Recreation Site Design and Development. Semester course; 2 lecture hours. 2 credits. Prerequisite: REC 331. General principles of planning and development of basic recreation areas and facilities; specific principles of design relating to outdoor recreation facilities; standards relative to space requirements, location, and programs; trends in site design and development.

332L Recreation Site Design and Development Laboratory. Semester course; 4 laboratory hours. 2 credits. Prerequisite: REC 331. Laboratory work correlated with REC 332. Can be taken only concurrently or subsequent to REC 332. (Laboratory fee required.)

341 Introduction to Travel and Tourism. Semester course; 3 lecture hours. 3 credits. Examination of historical perspective, basic policy issues, and social and economic impact of the travel and tourism field. Functions, programs, and objectives of various types of travel and tourism organizations will be studied.

371 Recreation for Special Populations. Semester course; 3 lecture hours. 3 credits. An introduction to services for special populations. Examines the various agencies and institutions which provide such services as well as the professional competency necessary for the delivery of leisure services to the handicapped; the physically, socially, and mentally disabled; and the aged. Introduces the student to the

techniques of client assessment and leisure counseling techniques.

395 Recreation Program Development. Semester course; 3 lecture hours. 3 credits. Prerequisite: REC 195. Principles of recreation program development; intensive study of the recreation program areas available to participants; analysis of the methods and techniques of program implementation and program evaluation.

403 Management of Recreation, Park, and Tourism Agencies. Semester course; 3 lecture hours. 3 credits. Principles of the administrative process. Deals with basic procedures of recreation administration, with particular emphasis on legal foundations, organizational structure, management theory, personnel practices and policies, legal liability, activity and liability insurance.

404 Revenue Sources for Parks and Recreation. Semester course; 3 lecture hours. 3 credits. Examination of the financing, budgeting, and marketing techniques used to develop and operate leisure service opportunities.

431 Advanced Recreation Facilitation Techniques. Semester course; 3 lecture hours. 3 credits. The course provides a study of advanced leadership, group dynamics, and human relationships used in leisure delivery systems. Students acquire skills in facilitation techniques including decision-making, problem-solving, conflict management, and evaluation strategies.

442 Group Travel Management. Semester course; 3 lecture hours. 3 credits. A study of the processes and procedures involved in the planning and organization of group travel. Emphasis will be given to the economic and political dimensions of travel, deregulation, how travel agencies function, professional liability, and future trends in the field.

445 Conference and Convention Planning. Semester course; 3 lecture hours. 3 credits. The planning, organizing, promoting, and implementing of conferences and conventions. Included will be the development of conference programming, financing, and public relations as well as negotiations with meeting facilities, hotels, and food services agencies.

461 Recreation Resource Management. Semester course; 3 lecture hours. 3 credits. A comprehensive overview of recreation resource management institutions, both public and private. Emphasis is given to the public sector at the federal, state, and local levels. Professional, service, and educational organizations contributing to outdoor recreation are examined. The legal framework operating within recreation resource management also is covered.

465 Park Operations and Maintenance. Semester course; 3 lecture hours. 3 credits. The purpose of this course is to gain an understanding of the concepts, principles, and practices of park operations and maintenance. Quantitative and qualitative resource evaluation will be emphasized. Special consideration is given to methods and techniques for determining management and operations policies.

472 Recreation Programs for Special Populations. Semester course; 3 lecture hours. 3 credits. Prerequisite: REC 371; open to therapeutic recreation option majors only. The development of leisure service programs for special populations. Includes a survey of programming for clients with selected handicaps and physical, mental, and social dis-

abilities. Emphasis will be on the delivery of such services in a community setting.

473 Leisure and the Aged. Semester course; 3 lecture hours. 3 credits. An analysis of the leisure needs of the aged. The need for specialized leisure programs for the aged in a variety of community and institutional settings will be explored. Preretirement counseling will be emphasized.

475 Recreation in Correctional Settings. Semester course; 3 lecture hours. 3 credits. A survey of recreational needs of inmates in adult and juvenile correctional institutions, short-term institutions, and community-based correctional institutions. The development of specialized programming and the role of recreation in the rehabilitative process will be examined.

476 Leisure Counseling. Semester course; 3 lecture hours. 3 credits. An introduction to the theory and application of leisure counseling as applied to special populations. The use of leisure counseling as a means of client evaluation and assessment also will be examined.

480 Specialized Recreation Programs for Handicapped Children. Semester course; 3 lecture hours. 3 credits. Development of recreation programs for handicapped children in schools, other institutions, and community settings. Consideration will be given to the development of leisure skills and goal accomplishments.

490 Seminar. Semester course; 3 seminar hours. 3 credits. Advanced seminar in recreation, parks, and tourism which analyzes in-depth special problem areas and current issues. Independent research on special projects.

491 Topics in Recreation. Semester course; 3 lecture hours. 3 credits, maximum six credits per semester; maximum total of 9 credits in all departmental topics courses which may be applied to the major. An in-depth study of specific content areas in recreation, park, and tourism operations. See Schedule of Classes for specific topics to be offered each semester.

492 Independent Study in Recreation. Semester course; 1-6 credits. Prerequisite: permission of departmental chairman. Under the supervision of a faculty member, the student selects a topic of concern to investigate. Each student must present his/her findings in writing and pass an oral examination before a faculty committee.

493 Internship. Semester course; 8 credits. Prerequisite: senior standing. Opportunities are offered for the student to gain practical experience in a variety of public, private, and commercial agencies. The student will complete an individualized course of study during a 10-week program consisting of 400 clock hours.

506 Contemporary Issues in Therapeutic Recreation. Semester course; 3 lecture hours. 3 credits. An examination of contemporary issues affecting the delivery of leisure services and programs to disabled persons. Both the scope and nature of leisure opportunities available to disabled individuals are considered. Special emphasis is placed on the role of the municipal recreation department in providing leisure opportunities to disadvantaged groups.

510 Tourism Policy. Semester course; 3 lecture hours. 3 credits. The examination of tourism policy with emphasis upon components of the industry involved in the formulation and implementation of public policy. The course will include

an analysis of the legislative programs of regional and national tourism organizations.

COURSES IN REHABILITATION SERVICES (REH)

201 Introduction to Rehabilitation Services. Semester course; 3 lecture hours. 3 credits. This course has been designed to expose the student to the history and development of the rehabilitation movement. Topics explored include basic concepts and philosophies of rehabilitation, psychological and vocational adjustment of the disabled, and an examination of selected rehabilitation methods.

202 General Alcohol and Drug Studies. Semester course; 3 lecture hours. 3 credits. This course is designed to help the student develop an appreciation of society's attitude about the use of drugs, particularly alcohol, and each individual's responsibility in decisions about the use of drugs. Discussion is offered on specific characteristics of drugs, how addiction occurs, and role of rehabilitation after addiction.

301 Development of Rehabilitation Potential. Semester course; 3 lecture hours. 3 credits. Provides an understanding of the problems confronting the unemployed and underemployed in achieving maximum employment potential. The particular nature of various problems encountered by such populations is analyzed, in relation to the nature of the requirements of employment.

312 Contemporary Rehabilitation Services. Semester course; 3 lecture hours. 3 credits. Role of the rehabilitation worker in the development of human resources. Organization of service delivery systems and community resources. The relationship of rehabilitation services to societal needs and identification of potential recipients of service.

314 Manpower and Labor Markets. Semester course; 3 lecture hours. 3 credits. A study of the condition of economically underproductive segments of the labor force and the impact of lost human resources in local labor markets.

321 Introduction to Alcoholism and Drug Abuse. Semester course; 3 lecture hours. 3 credits. Introduction to alcoholism/drug abuse as a progressive, family disease with consideration of basic contributing factors (physiological, psychological, and sociocultural); exposure to multidisciplinary rehabilitative approaches to arresting the disease, as well as some knowledge of intervention; brief mention of the highlights of the continuum of care available in the recovery process.

322 The Growth Process of the Alcoholic and Drug Addict. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 321. This course traces the progression of recovery from the isolation associated with the addiction process to a variety of modalities utilized in interrupting it as well as approaches designed to provide involvement and to maintain integration leading to an ongoing growth process.

350 Applied Rehabilitation Methods. Semester course; 3 lecture hours. 3 credits. Methods of intervention in rehabilitation, emphasizing the development of interpersonal skills, e.g., communication skills, interviewing techniques.

360 Work Evaluation and Adjustment in Rehabilitation. Semester course; 3 lecture hours. 3 credits. Provides an overview of principles of determining work potential and overcoming maladjustment to work. Characteristics of work environments, assessment of work potential, and contempo-

rary problems of work evaluation and work adjustment in rehabilitation services.

365 Manpower Community Resources. Semester course; 3 lecture hours. 3 credits. An examination of various community resources designed to prepare, upgrade, and provide services to the unemployed. Emphasis will be upon the mobilization of these resources to facilitate employability.

370 Job Development and Placement. Semester course; 3 lecture hours. 3 credits. An examination of the characteristics of the local labor market, the work barriers confronting special populations, and the methods and techniques involved in putting people to work. Special emphasis will be placed upon understanding employer demands, task and skill analysis, identifying attributes of clients, client/job matching skills, and follow-up techniques.

435 Human Resource Program Design. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. The utilization of planning data in the design of human resource programs. Objective setting, client group selection processes, work programs, mix of services, selection of service deliverers, staffing, budgeting, fiscal systems, monitoring, internal evaluation, information systems, and interagency cooperation as parts of the manpower program will be examined.

452 Crisis Intervention with the Alcoholic. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 321, 322, 523, or permission of instructor. Focus on the application of concepts discussed in theory in the recovery process course; sharing of difficulties and successes with crisis intervention by individuals already in the field; provision of new and more refined techniques under the direction of experts demonstrating their applicability.

456 Interpretative Processes in Rehabilitation. Semester course; 3 lecture hours. 3 credits. This course is concerned with methodology of collection, analysis, synthesis, and effective utilization of education, social, psychological, vocational, and medical information in the rehabilitation process.

465 Basic Alcoholism and Drug Case Management. Semester course; 3 lecture hours. 3 credits. Prerequisites: REH 321, 322, and permission of instructor. This course is an overview of the components involved in case management of the alcoholic, drug abuser, and his/her family. It will explore the interrelationship of the basic skills utilized by an alcoholism and drug abuse counselor and attempt to coordinate these functions into a total procedure.

470 Seminar in Manpower Services. Semester course; 3 seminar hours. 3 credits. Prerequisite: permission of instructor. A senior seminar designed to examine the role of a new manpower professional in a manpower agency. Topics include agency and unit goal analysis, role and job identification, authority structures, decision making, accountability, subordinancy, communications patterns, report writing, and survival skills.

491 Topics in Rehabilitation. Semester course; 3 lecture hours. 3 credits, maximum 6 credits per semester; maximum total of 9 credits in all departmental topics courses which may be applied to the major. An in-depth study of specific content areas in rehabilitation services. See Schedule of Classes for specific topics to be offered each semester.

494 Practicum in the Rehabilitation of the Alcoholic. Semester course; 3, 6, 9 or 12 credits. Prerequisite: permission of instructor. Opportunity to observe and participate in the 22 tasks of the alcoholism worker as outlined in the Littlejohn Report and required for certification; provision for general direction and supervision by the alcoholism personnel with the department and the direct supervision by a qualified person with the agency or facility.

495 Practicum in Rehabilitation. Semester course; 3, 6, 9, or 12 credits. Prerequisite: permission of instructor. Designed to provide opportunities for observation and participation in rehabilitation and related settings. Experiences are systematically related to theoretical concepts.

Note: The following graduate level courses are appropriate for undergraduate credit for advanced undergraduate students with permission of instructor.

502 History and Techniques of Manual Communication I. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Background and theory of manual communication will be covered in detail. A study of the basic principles of manual communication through nonverbal techniques, eye-contact training finger-spelling, and basic patterns of American Sign Language Systems. Also a focus on history and development of sign language and various methods of communication with deaf persons.

503 History and Techniques of Manual Communication II. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 502 and/or permission of instructor. A review and continued study of the theoretical development and techniques of basic sign language with emphasis upon additional sign vocabulary acquisition and improvement of expressive and receptive skills.

504 Advanced Manual Communication: Ameslan. Semester course; 3 lecture hours. 3 credits. Prerequisite: REH 503 or equivalent or permission of instructor. A comprehensive and in-depth study of the American Sign Language (Ameslan) as an independent language of the deaf with low verbal skills and emphasis on English and sign language idioms not known in most forms of manual communications.

505 Attitudinal Access, and Architectural Barriers in Rehabilitation. Semester course; 3 lecture hours. 3 credits. Will emphasize legislation concerning nondiscrimination, affirmative action, and architectural and transportation barriers. Will review the scope of the problem as well as the A.N.S.I. standards designed to overcome many of the obstacles to full participation in society. The course will involve field and laboratory exercises in handicap awareness. Students will meet with disabled persons to review the variety of mobility and access problems they encounter.

520 Introduction to Vocational Rehabilitation. Semester course; 6 hours. 6 credits. This course provides an intensive five-week exposure to the broad field of vocational rehabilitation. Classroom, seminar, and laboratory experiences are employed relative to the full range of physical and mental disabilities. Interaction with the various professional members of the vocational rehabilitation team and with individuals with various disabling conditions is arranged. The rehabilitation counselor's role and function as a member of the team is stressed.

523 Principles, Methods and Techniques in Treatment of the Alcoholic. Semester course; 3 lecture hours. 3 credits.

Prerequisites: REH 321 and 322 or permission of instructor. Integration of principles, methods, and techniques utilized in the recovery process of alcoholism especially in group work; exploration of various methods and theories as applied to treatment of the alcoholic, with provision for group involvement, cofacilitation, and practice counseling sessions.

525 Introduction to Rehabilitation. Semester course; 3 lecture hours. 3 credits. This course is designed to give the student a comprehensive overview of the rehabilitation process. It emphasizes the historical, philosophical, social, and legal aspects of rehabilitation. Special attention is devoted to the professional aspects of rehabilitation counseling. The need for the rehabilitation counseling, and skills and functions of the rehabilitation counselor are also covered.

527 Rehabilitation of the Industrially-Injured Client. Semester course; 3 lecture hours. 3 credits. This course emphasizes the unique needs of the industrially-injured client and current methods of rehabilitation and programs available through insurance companies and governmental agencies.

528 Prevocational Adjustment Practices With Mentally Retarded Persons. Semester course; 3 lecture hours. 3 credits. This course is designed to acquaint the student with prevocational adjustment practices as these relate to the rehabilitation process. Emphasis will be placed on activities and information geared toward complete rehabilitation of mentally retarded persons as well as utilization of community resources.

533 Directed Readings in Rehabilitation. Semester course; 3-6 credits. Provides an opportunity for students to intensify understanding in one or more areas of rehabilitation through directed readings under supervision of a faculty member. The study experience must be synthesized in a paper and written or oral examination before a faculty committee must be passed.

538 Rehabilitation and Hearing Impairment. Semester course; 3 lecture hours. 3 credits. Offers material on rehabilitation aspects of hearing impairments. Covers the implications of hearing-impaired population, services available in terms of vocational rehabilitation, and other agency efforts. It also focuses on methods of communication and the understanding of language development. The concept of multiple disabilities will be discussed as will some aspects of mental health and prevention. Offers material on the "deaf community" and emphasizes development of understanding of this special population group.

539 Current Problems in Rehabilitation. Semester course; 3 lecture hours. 3 credits. A study of developments and implications resulting from rehabilitation research and demonstration activities. Agency problems related to staff improvement and expansion of rehabilitation services and facilities will also be considered as well as reviews of specific disability problems and trends in rehabilitation.

540 Directed Readings in Alcoholism. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. Opportunity to investigate and pursue in depth a particular concept encountered in the alcoholism concentration courses or to study in detail a particular problem in alcoholism while working in the field; under the direction of the alcoholism personnel in the department.

551 Treatment of the Alcoholic with Significant Others. Semester course; 3 lecture hours. 3 credits. Prerequisites:

REH 321, 322, 523, or permission of instructor. Stress on the importance of the family disease concept of alcoholism utilized throughout the concentration series; demonstrations and role-playing of situations involving the alcoholic and significant others provided; discussions of Multiple Impact Family Therapy and other approaches developed relevant to the alcoholic.

559 A Survey of Rehabilitation of Blind and Visually Impaired Individuals. Semester course; 3 lecture hours. 3 credits. The purpose of this course is to acquaint the student, rehabilitation counselors, and other personnel working in related areas with problems encountered in the rehabilitation of blind and partially sighted persons.

561 Work Evaluation Techniques for Rehabilitation. Semester course; 3 lecture hours. 3 credits. An in-depth examination of the methods and techniques utilized in determining employment potential. The role of the work evaluator in the rehabilitation process. Specific procedures and approaches are analyzed including the TOWER System, Singer-Graflex System, and other methods currently utilized in rehabilitation services.

562 Work Adjustment Techniques for Rehabilitation. Semester course; 3 lecture hours. 3 credits. An in-depth analysis of methods utilized in overcoming maladaptive worker behavior in rehabilitation services including group process, sheltered workshops, and nonverbal techniques. The role and function of adjustment personnel in the rehabilitation process. Current problems and research in methods of adjustment.

563 Independent Living in Rehabilitation. Semester course; 3 lecture hours. 3 credits. This course will offer students an opportunity to acquire the knowledge and skills necessary for providing services to severely disabled people in the area of independent living. Emphasis will be placed on evaluation and adjustment approaches for people who are clients of public and private rehabilitation centers, employment workshops, group homes, and in the emerging centers for independent living in rehabilitation.

593 Field Work Practicum. Semester course; 3 hours. 3 credits. An eight-week on-the-job experience jointly supervised by a university faculty member and by the student's training supervisor in the public or private rehabilitation agency or facility in which the student is employed. A choice of exercises is programmed to encourage the further integration of concepts, practices, and skills with actual agency policy and service delivery.

COURSES IN URBAN STUDIES (USP)

116 Introduction to Urban Studies. Semester course; 3 lecture hours. 3 credits. Introduction to the various theories of urbanism and attempts to offer solutions to the problems of urban life in modern civilization. The course will survey the major works of those who have studied cities during the past century and who have either attempted to explain the problems and potential of cities or offered solutions and alternatives to existing urban structures. The works of noted social reformers, political analysts, economists, and architects as well as urban planners will be examined through lectures, readings, films, slides, discussions, and field trips (when feasible).

302 Land Use Capability. Semester course; 3 lecture hours. 3 credits. An introduction to the principles, concepts, and knowledge involved in determining the capacity of land under various conditions to support a variety of uses.

304 Urban Social Systems. Semester course; 3 lecture hours. 3 credits. A study of the growth and development of neighborhoods, cities, and metropolitan systems. Analyzes origins of community interests and factors which affect the ability of communities to further their interests. Particular attention is given to how patterns of service delivery and the placement of public facilities affect community interest and whether federal or municipal departments are able to set adequate community service standards.

306 The Urban Economic Base. Semester course; 3 lecture hours. 3 credits. Examines the urban community as a micro-economy. Special attention will be given to the requirements for continued economic growth, the urban economic hierarchy, and the differences of economic base development as exhibited from place to place. Further elements for consideration will be the role of industrial development, the evaluation of the central business district, and basic economic strategies available to the planner.

310 Introduction to Public Planning. Semester course; 3 lecture hours. 3 credits. Introduction to theory and practice of governmental planning in the U.S. with emphasis on urban and regional planning. Survey of the history of urban planning, the current planning practice at the local level, and the ethical responsibilities of planners. This course is designed to give students an understanding of the meaning and form of governmental intervention into social and economic systems.

313 Urban Research and Field Methods. Semester course; 1 lecture and 4 laboratory hours. 3 credits. Methods of data collection, organization, and updating; the use of secondary information; applications of elementary statistical analysis and of graphic and cartographic analysis.

321 Urban Economics. Semester course; 3 lecture hours. 3 credits. Prerequisite: ECO 201, 202, or 203. An introduction to urban economics, with an emphasis on the economics of agglomeration and the role of externalities in the urban economy. Economic analysis of the provision of urban public services and urban public financing especially in politically fragmented areas.

322 Urban Finance. Semester course; 3 lecture hours. 3 credits. Analyzes the financial viability of American urban areas; compares revenue sources and spending patterns of growing urban areas to the fiscal dilemma of declining ones, with emphasis on central city suburban conflicts; traces patterns of intergovernmental assistance; identifies causes of urban financial strains and evaluates the feasibility of proposed solutions.

331 Environmental Systems. Semester course; 3 lecture hours. 3 credits. Consists of a broad overview of relevant physical science subjects: climatology, soils science, plant ecology, hydrology, geology, and geomorphology. These subjects are viewed together in a systems framework taking into account the many interactions among environmental systems and between these systems and man.

332 Environmental Management. Semester course; 3 lecture hours. 3 credits. Provides a framework for developing environmental management objectives and techniques. The focus of the course is on a study of natural hazards in Virginia and a variety of approaches to reducing losses from these hazards.

333 Energy and Conservation Planning. Semester course; 3 lecture hours. 3 credits. An inquiry into the future implications of policy and planning issues arising from alternative strategies for energy conservation and development. The long-term effects of various energy practices on American urban areas, in the social, economic, and environmental context of land use systems.

337 Urbanization and Blacks: A Cross-Cultural Comparison. Semester course; 3 lecture hours. 3 credits. Comparison and evaluation of past and contemporary urbanization patterns of black people primarily in Africa and America, their current social, economic, and political problems, and the range of solutions being proposed for dealing with them.

340 Urban Habitat. Semester course; 3 lecture hours. 3 credits. An examination of urban habitats in a variety of geographical regions, with emphasis on their differences and their common experiences.

350 Culture and Urbanism in Great European Cities. Semester course; 3 lecture hours. 3 credits. Prerequisite: sophomore standing or permission of instructor. Course may be repeated under different topics for a total of six credits. An interdisciplinary course with a dual focus on the origin, expansion, and significance of an important European city and on reflections of urbanism in its culture. Particular emphasis will be placed on relating the physical, social, and economic aspects of the city's growth and development to the cultural dimensions of urbanism, especially as the latter are manifested in major works of literature.

391 Special Topics in Urban Studies. Semester course; 1, 2, or 3 credits. Students will have an opportunity to examine in detail some questions of significance. Due to the changing subject matter to be treated in this course, permission of the instructor is required. Consult the Schedule of Classes for the specific topic to be offered each semester.

392 Independent Study. Semester course; 1 to 3 lecture hours. 1 to 3 credits. Under supervision of a faculty advisor, who must approve the student taking the course, a student studies a topic of interest. Junior or senior standing is required.

397-398 Independent Study. Semester course; 2 or 3 lecture hours. 2 or 3 credits. Under supervision of a faculty advisor, whose consent is required to register, study a topic of concern to the student. Junior or senior standing is required.

413 Policy Implementation. Semester course; 3 lecture hours. 3 credits. An examination of the administrative setting of government, and its policy impacts on public programs; policy design and redesign; and evaluation and monitoring.

433 Comparative Urban Experiences in the United States. Semester course; 3 lecture hours. 3 credits. An examination and comparison of selected American cities and metropolitan areas with special focus on those issues relevant to regional variations affecting growth and issues of national patterns of urbanization. The course explores the myth and reality of the Sunbelt versus the Frostbelt, national fiscal and investment flow, and migration patterns.

440 Senior Seminar: The Good City. Semester course; 3 lecture hours. 3 credits. Prerequisite: senior standing. Readings, discussion, and individual research into "the good city" as it is expressed theoretically and practically. Perspectives from the arts and humanities, as well as the social sciences, are brought to bear on the normative question, "What is the good city?" A research project is a requirement.

493 Urban Government Internship. Semester course; 150 clock hours in a local legislative body or administrative agency. 3 credits, may be repeated once for a maximum total of six credits; or 300 clock hours, six credits. Approval of selection committee required. Under supervision of a faculty committee and a field supervisor, the internship is designed to present opportunities for qualified students to acquire exposure to aspects of public decision-making processes by participation in (1) local legislative bodies of the Richmond metropolitan area, (2) local and regional administrative agencies, commissions, and boards, and (3) private organizations that have demonstrated interest in local government and politics.

Note: The following graduate level courses are appropriate for undergraduate credit for advanced undergraduate students with permission of instructor.

511 Urban Public Policy-Making Processes. Semester course; 3 lecture hours. 3 credits. A study of the dynamics of conflict resolution in behalf of and within the urban community; the manner in which competing interests are articulated and aggregated in attempts to shape urban public policy, the various levels and kinds of governmental machinery designed to resolve the conflicts.

512 Metropolitan and Regional Public Management. Semester course; 3 lecture hours. 3 credits. Examines the relationship between metropolitan growth and the fragmentation of governmental systems; assesses capacity of fragmented governmental systems to formulate rational public policy in relation to forces impeding or facilitating political integration of a metropolitan area; evaluates mechanisms designed to reduce governmental fragmentation.

513 Planning Graphics. Semester course; 1 lecture and 2 laboratory hours. 2 credits. Introduction to the use of graphics as an aid in presenting and analyzing planning ideas, data, reports, maps, and plans. Laboratory fee required—\$25.

514 Computer Mapping. Semester course; 1 lecture and 2 laboratory hours. 2 credits. An introduction to the use of computers for map compilation, design, and production. Includes principles of digital cartography and the use of geographic base files in urban and regional planning. Laboratory fee required—\$5.

515 Cartography and Air Photo Interpretation. Semester course; 2 lecture and 2 laboratory hours. 3 credits. An introduction to the preparation and interpretation of data in cartographic form. Included is the methodology of map making, introductory photogrammetry, object recognition, stereograms, area measurement, and mapping from aerial photos.

516 Computerized Planning Information Systems. Semester course; 3 lecture hours. 3 credits. An advanced course in the development and use of computerized data bases for planning applications. Prerequisite: completion of USP 514 or consent of instructor.

522 Programming and Budgeting. Semester course; 3 lecture hours. 3 credits. Principles and procedures of budgeting by government units and public agencies as they affect planning, policy making, implementation, and evaluation. Topics covered include an overview of budgeting theory: line item, performance, program, management by objectives, and zero basic budgeting.

540 Historic Preservation in Planning. Semester course; 3 lecture hours. 3 credits. The course surveys the process of historic preservation which includes the evaluation of sites, identification of architectural styles, the adaptive use of sites and structures, and the various sources available for implementing preservation proposals in government or in the private sector. Preservation is considered as a tool in the planning process and its application to neighborhoods, downtowns, and other city districts is considered.

552 Urban Transportation Systems. Semester course; 3 lecture hours. 3 credits. Prerequisite: permission of instructor. An examination of urban requirements for mobility, transportation systems, problems of traffic, mass transit, and new concepts for moving people and goods.

561 Housing and Development Policy. Semester course; 3 lecture hours. 3 credits. An examination of public policy in housing and development as it has evolved and is evolving in application and practice. The course will focus on the most recent experimentations and adjustments in policy at the national and local levels. Also included are the classic studies of housing and development as a social problem.

571 Introduction to the Study of the Future. Semester course; 3 lecture hours. 3 credits. Introduction to the study of the future; considers the perspectives, assumptions, and forecasts of futurists and the methods and tools of future research; examines those forces which are presently shaping the future environment and addresses issues of paramount importance in the 1980s.

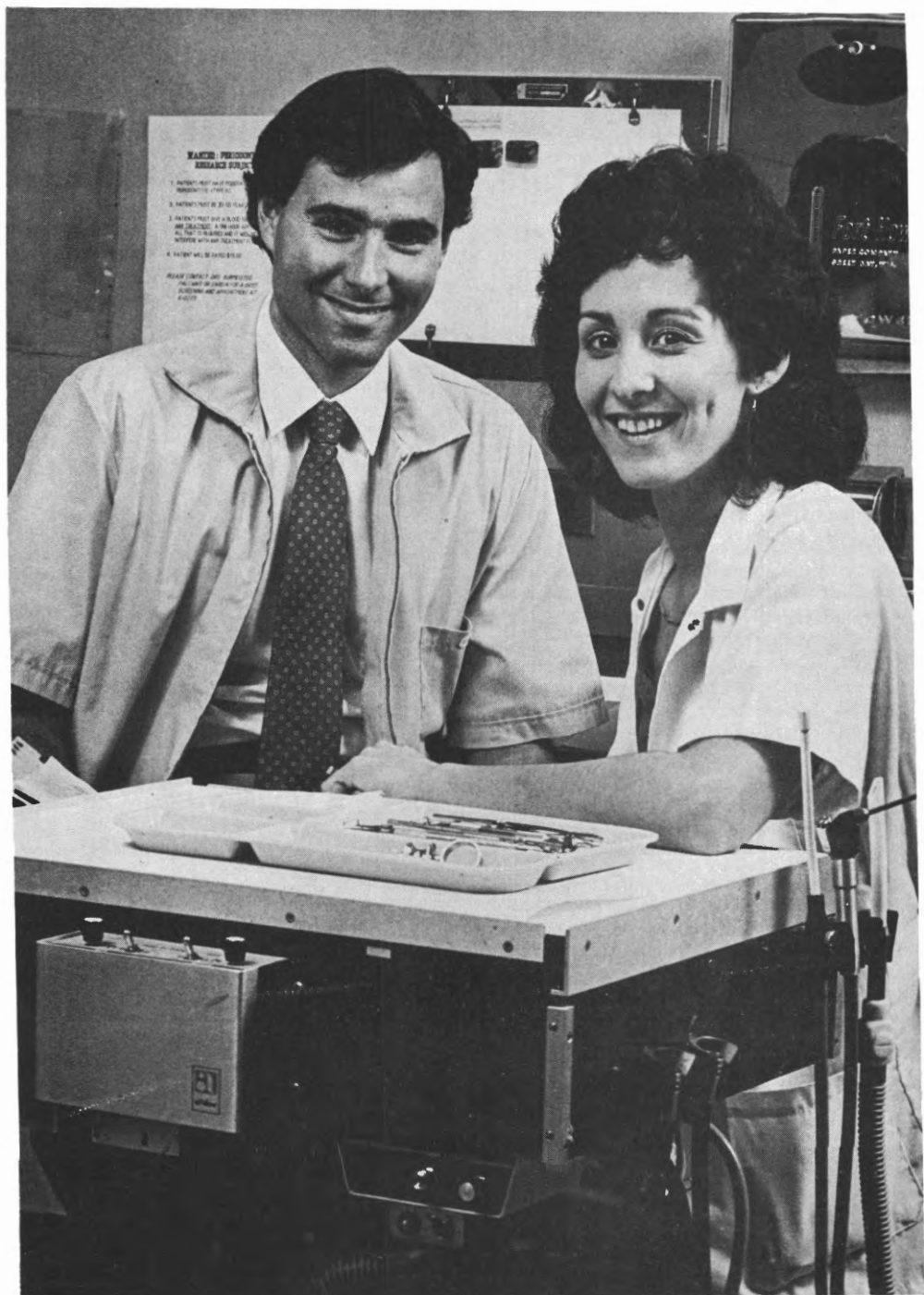
581 Land Use and Site Planning. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Principles of land planning and analysis are investigated in both classroom and studio settings. Environmental impacts and the capacity of environmental systems are evaluated in relation to the site requirements of various urban and rural situations. Graphic techniques necessary for applying these principles are described so that the student can develop and evaluate site plans for various purposes and at various scales. Actual site planning exercises are used as a way of grasping the course information.

COURSES IN ENVIRONMENTAL STUDIES (ENS)

490 Research Seminar in Environmental Studies. Semester course; 3 lecture hours. 3 credits. Prerequisite: senior standing and at least 12 hours of approved environmental studies course work. An interdisciplinary examination of problems and issues central to environmental studies. Environmental research of VCU faculty will be reviewed, and selected local environmental problems will be studied. A research project focusing on a specific environmental question will be completed by each student.

491 Topics in Environmental Studies. Semester course; variable credit. 1-3 credits per semester; may be repeated with different topics for a maximum of six credits. Prerequisites vary by topic; see Schedule of Classes for specific prerequisites. An in-depth study of a selected environmental topic.

493 Environmental Studies Internship. Semester course; variable credit. 1-3 credits per semester; maximum total of six credits. Open generally to students of senior standing. Students receive credit for work on environmental projects with approved agencies. Participation requires the approval of both a faculty member and an agency.



The School of Dentistry provides opportunities for qualified individuals to study dentistry, advanced dental education, and dental hygiene under the most favorable conditions.

PART XII—School of Dentistry

LINDSAY M. HUNT, JR.

Dean

JAMES E. HARDIGAN

Assistant Dean

RICHARD R. RANNEY

Assistant Dean for Research and Graduate Affairs

JAMES H. REVERE, JR.

Executive Associate Dean for Clinical Affairs

MARSHALL BROWNSTEIN

Interim Assistant Dean for Student Affairs and Admissions

F. B. WIEBUSCH

Assistant Dean for Continuing Dental Education

JOSEPH K. WITTEMANN

Director of Educational Evaluation, Planning, and Research

The School of Dentistry offers the first professional degree program leading to the Doctor of Dental Surgery degree and an undergraduate program leading to the Bachelor of Science in dental hygiene. Additional information on these programs may be found in the university's *Medical College of Virginia Bulletin*.

DENTAL HYGIENE PROGRAM

SHERWIN R. FISHMAN

Interim Director for Dental Hygiene Program

The Dental Hygiene Program, instituted in 1969, offers courses in the School of Dentistry leading to a Bachelor of Sciences degree in dental hygiene. The program requires two years of liberal arts study, with a minimum of 60 semester hours, followed by two years of study in dental hygiene. The Dental Hygiene Program is accredited by the Commission on Accredita-

tion of the American Dental Association. Upon successful completion of the program, graduates will be eligible for national, regional, and state board licensure examinations.

The Dental Hygiene Program believes that the modern practicing hygienist needs a broad range of skills to function effectively. Training in particular clinical-technical skills, while essential, will not be sufficient to meet increasing social demands for comprehensive oral health care at all societal levels. The program sees the baccalaureate degree dental hygienist as a key agent, not only in helping the dental profession respond to changing demands, but also in helping to facilitate change itself.

ACADEMIC ADMISSION REQUIREMENTS

Two years of liberal arts study in an accredited two-or four-year institution with a minimum of 60 semester credits are required.

A. Courses

1. Specific

- a. English—1 year
- b. Biology
- c. Chemistry—1 year
- d. Anatomy and Physiology
- e. Introductory Sociology
- f. Introductory Psychology
- g. Introductory Speech
- h. Basic Statistics

2. Approved electives fulfilling the distribution requirements of the liberal arts college or university currently attending.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM

The Dental Hygiene Program includes study of the basic biomedical, dental, and clinical sciences through lecture, laboratory, clinical, and community experiences. It runs approximately 64 weeks over two academic years with considerable emphasis placed on skills relative to patient health delivery.

Credits

Junior Year, First Semester

ANA 507 Head and Neck Anatomy (Lecture and Lab) . . .	5
MIC 365 Infection and Immunity (Lecture and Lab) . . .	3
NUR 341 Human Nutrition	2
ORP 301 General Pathology	1
ORP 621 Dental Radiology	0.5
RED 311 Dental Anatomy (Lecture and Lab)	3
DEH 301 Dental Hygiene I (Lecture and Lab)	4
	<u>18.5</u>

Junior Year, Second Semester

ANA 302 Microscopic Anatomy	3
ORP 524 Oral Pathology	2
RED 302 Dental Materials (Lecture and Lab)	2
DEH 302 Dental Hygiene II (Lecture and Clinic)	4
DEH 312 Community Dental Health I	3
DEH 322 Dental Radiology Seminar and Rotation	2
	<u>16</u>

Senior Year, First Semester

PMC 441 Pharmacology and Pain Control	5
PER 411 Periodontics	2
DEH 401 Dental Hygiene III (Lecture, Lab and Clinic) . .	5
DEH 411 Community Dental Health II	3
GED 620 Cardiology or Approved Elective	2-3
	<u>17-18</u>

Senior Year, Second Semester

DEH 402 Dental Hygiene IV (Clinic)	7
DEH 412 Community Dental Health III (Extramural Program)	4
DEH 422 Dental Hygiene Seminar I (Current Practice Issues)	2
DEH 442 Dental Hygiene Seminar III (Clinical Teaching)	2
	<u>15</u>

ADDITIONAL INFORMATION

For further details regarding the requirements for promotion and graduation in the Dental Hygiene Program, contact the Director of Dental Hygiene, Medical College of Virginia, Virginia Commonwealth University, Box 566, Richmond, VA 23298-0001, (804) 786-9096.

For application information contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001, (804) 786-0488.



VCU's School of Education is one of the most comprehensive education schools on the East Coast; its broad-based program and well-qualified faculty attract students of diverse interests and backgrounds.

PART XIII—School of Education

JOHN S. OEHLER, JR.

Acting Dean

A. GAYNELLE WHITLOCK

Assistant Dean

GORDON KEESEE, JR.

Director of Student Services

THOMAS A. HEPHNER

Director of Continuing Education

RIZPAH L. WELCH

Director, Educational Development Centers Complex

The School of Education provides professional preparation for students planning to teach in elementary and secondary schools—with a particular orientation toward urban education. Programs of teacher education combine comprehensive studies in general education with professional preparation and concentration in specific fields of study. Practical applications and experiences in the education field are an integral part of all programs in teacher preparation. Each program is designed to contribute to both the personal and professional development of the prospective teacher.

DEGREE PROGRAMS IN TEACHER PREPARATION

The preparation of teachers is a joint responsibility of faculty in both the subject fields and professional education, with curricula planned cooperatively by the various university departments and the School of Education.

The School of Education awards Bachelor of Science degrees in elementary education, occupational education, secondary education, health

education, physical education, and special education. The School of the Arts offers Bachelor of Fine Arts degrees in art and theatre education, as well as a Bachelor of Music Education degree. The School of Business awards a Bachelor of Science degree in business education.

DEGREE PROGRAMS IN THE SCHOOL OF EDUCATION

The School of Education has both undergraduate and graduate degree programs. Responsibility for the programs is handled by the four divisions in the School of Education as follows:

- I. Division of Educational Services
 - B.S. in Special Education:
 - Behavior Disorders
 - Learning Disabilities
 - Mental Retardation
 - Severe Profound Handicaps
- II. Division of Educational Studies
 - B.S. in Occupational Education
- III. Division of Health and Physical Education
 - B.S. in Health Education
 - B.S. in Physical Education
- IV. Division of Teacher Education
 - B.S. in Elementary Education
 - Early Childhood NK-4
 - Middle Education 4-8
 - B.S. in Secondary Education
 - Biology
 - Chemistry

English
 French
 General Science
 German
 History/Social Sciences
 Mathematics
 Physics
 Spanish

GENERAL DEGREE REQUIREMENTS

Students in teacher preparation degree programs are expected to complete a minimum of 124 credits and to maintain a minimum cumulative grade-point average of 2.0. Though various degree programs vary in specific course requirements, all degree programs in education require a minimum of 54 semester hours of general education in the following areas:

Credits

HUMANITIES	
English Composition and Rhetoric	6
Literature	3
Humanities Elective	3
	<u>12</u>

SOCIAL SCIENCES	
American History	3
General Psychology	3
Social Science Electives	6
	<u>12</u>

SCIENCE/MATHEMATICS	
Laboratory Science	4
Mathematics	3
Computer Science	3
Science/Mathematics Elective	3-4
	<u>13-14</u>

HEALTH/PHYSICAL EDUCATION	
Health Education	3
Fitness and Weight Control	1
	<u>4</u>

The remaining 12-13 semester hours needed to complete the 54-hour requirement must be selected from the humanities, social sciences, sciences, or mathematics.

Individual degree programs, as delineated on the following pages, specify the particular courses necessary to meet program and certification requirements. Besides the general education component, all programs require professional education and clinical experiences. In calculating grade point averages for the School of Education requirements, all courses attempted are used.

Faculty Advisement

Undergraduate degree-seeking students who are admitted to Virginia Commonwealth University and who plan to pursue a degree program in education are assigned a faculty advisor in the School of Education. While the advisor will attempt to provide timely and accurate assistance, the student has the responsibility to know and to satisfy the degree requirements of the academic program being pursued.

PROFESSIONAL EDUCATION SEQUENCE

I. Initial Steps

All undergraduate education majors are required to begin their professional component with six hours of course work in education foundations: EDU 300 Foundations of Education and EDU 301 Human Growth and Learning and to apply for admission to Teacher Preparation.

Foundation Requirements

Prior to enrollment in EDU 300, students must complete a minimum of 45 semester hours of general education course work, distributed to include the following:

English	6 semester hours
Mathematics	3 semester hours
Laboratory Science	4 semester hours
History and Social Science	6 semester hours

Students must take the two foundation courses at VCU. Consideration of transfer credit will be made if a student has taken equivalent courses at another institution. Credit will not be granted, however, unless acceptable performance is demonstrated on competency tests administered by the Foundation Core. To initiate possible transfer credit, students should consult with their advisors.

Admission to Teacher Preparation

Students are expected to apply for admission to Teacher Preparation prior to or concurrent with their enrollment in EDU 300 and EDU 301. Admission to Teacher Preparation requires:

- A. Completed application (Applications are available from and should be returned to the School of Education's Office of Student Services, Oliver Hall, Room 2087.)
- B. A minimum cumulative GPA of 2.5 (This GPA requirement also applies to students with a previous undergraduate degree who desire to earn state teacher certification through one of VCU's state-approved programs.)

- C. Completion of the reading and mathematics competency tests (Information and dates for administration of these tests are available in the School of Education's Office of Student Services, Oliver Hall, Room 2087.)

Students are expected to complete the requirements for admission to Teacher Preparation before completing EDU 300 and EDU 301.

Admission to Teacher Preparation does not itself guarantee successful completion of the requirements to teach; rather student performance will ensure this end. Student evaluations will include such criteria as overall performance in the professional education sequence as well as certain behaviors and attitudes thought to be related to success in teaching, as exhibited over the duration of the degree program. The administration and faculty reserve the right to counsel out of any degree program students whose overall performance is deemed unacceptable, or who are convicted of an offense that would affect their successful performance as teachers.

II. Admission to Clinical Teacher Education

Admission to *Clinical Teacher Education* affords individuals actual "hands on" experiences in appropriate educational settings. Individuals pursuing teacher certification will be placed in classrooms of schools located in the Richmond metropolitan area. For those individuals not seeking teaching endorsement, other appropriate field placements will be selected for their experience.

Admission to this component is selective and follows admission to the Teacher Preparation Program. An application should be made when a student has completed between 60 and 75 semester hours of course work.

Admission requirements are

- A. Completed Application (Applications are available from and should be returned to the School of Education's Office of Student Services, Oliver Hall, Room 2087.)
- B. A minimum cumulative GPA of 2.5 (This GPA requirement also applies to students with a previous undergraduate degree who desire to earn state teacher certification through one of VCU's state-approved programs.)
- C. Acceptable scores on the reading and mathematics competency tests (Information and dates for administration of these tests are avail-

able in the School of Education's Office of Student Services, Oliver Hall, Room 2087.)

Applications are reviewed by the faculty members in the appropriate cores, and students are notified in writing of their acceptance and initial field placement. Most students enroll in EDU 310 Practicum for this experience; elementary education majors will take either EDU 322 or 325 Planning for Teaching.

III. Admission and Placement of Students in Student Teaching and Supervised Non-School Experiences

Students should complete an application for *Student Teaching* or a *Supervised Non-School Experience* a semester prior to the one in which they expect to student teach. These clinical experiences generally occur during a student's last semester at VCU. Application requirements are:

- A. Completed Application (Applications are available from and should be returned to the Office of Student Services, Oliver Hall, Room 2087. Dr. Michael Davis, Coordinator of Student Placement and Supervision, may be contacted for additional information.)
- B. A minimum cumulative GPA of 2.5 (This GPA requirement also applies to students with a previous undergraduate degree who desire to earn state teacher certification through one of VCU's state-approved programs.)
- C. A grade of "C" or better in practicum and a recommendation from the practicum supervisor.

Students will be notified of their placement by the Office of Student Services.

Circumstances occasionally may change a student's career pursuit in the final year of study to make teaching and teacher certification no longer a goal. Students may, with their advisor's and division head's approval, submit a request form to waive student teaching. Such a request, made to the dean, necessitates a cumulative GPA of 2.5. Students are not encouraged to seek a waiver of student teaching since teacher certification requires this field experience. Those students granted this option must still meet the number of credits required in professional education.

Cooperative Education

The Cooperative Education Program is available to qualifying students in the School of Education who are pursuing undergraduate degrees in Teacher Education and in Special Edu-

cation. A full description of the program appears on page of the bulletin.

CHANGE OF MAJOR AND TRANSFER STUDENTS

Undergraduate students not originally intending to major in an education degree program may transfer to the School of Education from another school in the university providing they hold a minimum GPA of 2.0. Change of major forms are available at University Enrollment Services/Records and Registration.

Transfer students to the university who carry a minimum grade-point average of 2.0 are likewise eligible to become degree-seeking students in the School of Education. Transfer and change-of-major students must meet the criteria for admission to Teacher Preparation as specified previously.

Transcript Evaluation

The evaluation of transcripts presented by change-of-major and transfer students is done in the Office of Student Services, School of Education. Acceptance of credit is determined on the basis of congruence with specific program guidelines. Course equivalents from accredited colleges and universities are accepted if the grade earned is "C" or better. To meet eligibility requirements for Admission to Teacher Preparation, students must present at least 30 semester hours of acceptable undergraduate course work. See the specific criteria under "Admission of Teacher Preparation."

Credits accepted from two-year institutions can meet general education requirements, but are not acceptable for professional requirements which are considered to be "upper division." The *Virginia Commonwealth University Transfer Guide for Virginia Community Colleges* serves as the official guide. Initial evaluation of transfer credit occurs in the Office of Student Services. An advisor reviews the accepted transfer credits with a student to determine course work needed at VCU. An advisor is not required to use all of the accepted transfer credits in a program of study, however; only those credits approved for transfer may be applied toward the degree.

Second Baccalaureate Degree

Individuals holding an undergraduate degree in another field who wish to obtain teacher

certification are advised to consider a second baccalaureate degree. Contact should be made with the appropriate division in the School of Education where the desired undergraduate program is located.

TEACHER CERTIFICATION

Students fulfilling degree requirements in any one of Virginia Commonwealth University's teacher preparation programs are eligible when recommended by the School of Education to receive initial certification from the Virginia State Department of Education. For information relating to initial certification, add-on endorsement, or certification renewal, inquiries should go to the Office of Student Services, School of Education.

Scores on the National Teacher Examinations (NTE) are required for initial certification in Virginia. An applicant for this initial certification must take the NTE Core Battery and, in addition, a Specialty Area Examination in any field in which certification is sought. In those few fields where a Specialty Area Examination is not available, only the NTE Core Battery is required of candidates. The NTE requirements are in addition to all other requirements for certification. Students should consult their advisors concerning the most advantageous times for taking these examinations.

Students should request that their scores from the NTE be reported to Virginia Commonwealth University and the Virginia Department of Education. These scores must be on file with the Office of Student Services, School of Education before a recommendation for certification can be sent to the Teacher Certification Division of the Virginia Department of Education. Further information may be obtained from the Office of Student Services, School of Education.

APPROVED PROGRAMS AND CERTIFICATION RECIPROCITY

All of Virginia Commonwealth University's undergraduate teacher preparation programs are approved by the Virginia Department of Education and accredited by the National Council for Accreditation of Teacher Education (NCATE).

Teacher certification reciprocity with other states is available to graduates of the undergraduate degree programs. Interested students should consult with the School of Education's Office of Student Services.

SCHOOL OF EDUCATION'S FACILITIES AND SERVICES

Facilities

Facilities for the School of Education are housed in Oliver Hall, the Franklin Street Gym, and the Educational Centers Complex. Instructional areas include traditional classrooms, as well as laboratory and activity centers.

Office of Student Services

The School of Education's Office of Student Services coordinates many of the activities necessary for endorsement and certification of educational personnel in the state of Virginia. Its functions include the distribution of information and the processing of various applications required by the School of Education for teacher preparation programs. Placement of individuals in clinical experiences is also handled through this office. Field placements are primarily made in the city of Richmond and the surrounding counties of Henrico, Chesterfield, and Hanover. Several national testing programs such as the College Level Examination Program (CLEP) and the National Teacher Examinations (NTE) are coordinated and administered by the Office of Student Services.

Teacher Resource Center

The School of Education offers students the opportunity to utilize a variety of multimedia materials which are housed in the Teacher Resource Center on the third floor of Oliver Hall. Media and photography laboratories, as well as microcomputer facilities with an expanding software library are part of the center. Other materials are available to help in the planning, developing, and critiquing of instructional strategies.

Educational Development Centers Complex

The Educational Development Centers Complex brings together in a coordinated network the following training/service units: the University Reading/Child Study Center; the Adult Learning Center; and the University Day Care Center. Each provides assistance to individuals while providing a basis for on-campus training and research.

The Reading/Child Study Center on the Academic Campus offers diagnostic and remedial assistance to VCU students as well as to individuals in the community. It brings together

prospective teachers, psychologists, and social workers to function as a team in a practicum setting. This multidisciplinary approach gives trainees realistic experiences and provides research opportunities for faculty and students.

The Reading/Child Study Center is also responsible for the administration, scoring, reporting, and follow-up activities associated with reading diagnostic testing of all incoming freshmen students. Additionally, the center serves as a test materials center, providing students an opportunity to see and use a variety of materials.

A well-equipped Adult Learning Center is housed on the Academic Campus. It utilizes the latest advances in educational technology and individualized instruction. Remedial and enrichment noncredit study programs are offered on a flexible schedule to VCU employees and college students.

Activities of the Day Care Center, located on the MCV Campus, are designed to provide quality services for children of working parents, particularly the children of university employees and students. When space permits nonuniversity associated families may use its facilities. Additionally, the Day Care Center provides practicum experiences for students on both campuses.

Computer Laboratory

The computer laboratory is operated and maintained jointly by the School of Education and the Department of Mathematical Sciences, College of Humanities and Sciences. The laboratory is located on the third floor of the Oliver Hall Education wing and is in addition to the smaller micro-computer laboratory housed in the Teachers' Resource Workshop (TRW). The laboratory offers many opportunities to School of Education students; students can learn about computer-assisted instruction and the use of computers in the classroom setting. Also, the laboratory offers support to students who are taking the computer science basic literacy course. Equipment in the laboratory includes Apple IIe computers with printers and a mixture of color monitors.

DIVISION OF EDUCATIONAL SERVICES

RICHARD S. VACCA

Acting Chairman

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William Bost

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Elise Blankenship

Mary Beth Bruder

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Howard Garner
James Gumaer
Gordon Keesee
Rosemary Lambie
Fred Orelve
John Seyfarth
Howard Sparks
Rizpah Welch

George Giacobbe
William Judd
John Kregel
Jean Lokerson
Charles Ruch
Charles Sharman
Paul Wehman
Gaynelle Whitlock
Judy Wood

SPECIAL EDUCATION

The Division of Educational Services provides preservice training that leads to a Bachelor of Science in special education with specialization in one of the following: behavior disorders, learning disabilities, mental retardation, or severe/profound handicaps.

The program is designed to develop the knowledge and skills required for teaching exceptional individuals in public and private settings. Upon completion of the program, students will be eligible for teacher certification, K-12.

The course work includes a general education component in liberal arts/science; a professional education/special education common core component; a specialization component; and a clinical component. A variety of field and clinical experiences provide students with opportunities to apply concepts learned in the university classroom and to assume increased responsibility for maintaining a successful learning/teaching environment.

Behavior Disorders

This specialization prepares students to teach behavior disordered/emotionally disturbed individuals in school and residential settings. Integration of didactic course work and clinical experiences allows students to apply a variety of interventions throughout training. Emphasis is placed upon developing a broad range of teaching competencies, derived from various theoretical models, to engender social/behavioral and academic growth in pupils.

Learning Disabilities

This specialization is designed to develop the basic understandings and skills required for teaching learning disabled children and youth. Course work and program experiences assist the prospective teacher in developing the diagnostic, programming, and teaching skills needed to promote learning in individuals who cannot progress utilizing standard techniques. Both volunteer and course-related clinical and field experi-

ences are required for the application of techniques to actual settings.

Mental Retardation

This specialization prepares students to teach mentally retarded individuals in public, private, and community settings. The program emphasizes assessment, curriculum, service delivery, and adaptation techniques for general educators. Students in the mental retardation specialization acquire many of the competencies of teachers in general education and develop a broad knowledge of other exceptionalities.

Severe Profound Handicaps

This specialization offers course work and experiences in working with severely and multi-handicapped individuals in a variety of educational and community settings. Program content is geared to developing general competencies in assessment, curriculum, and instructional programming and service delivery. Also, emphasized is specialized knowledge of behavior management, physical impairment, vocational programming, and family intervention.

PROGRAM REQUIREMENTS IN SPECIAL EDUCATION (129 Hours Minimum)

- I. **General Education** (57 hours minimum) *Credits*
 - Humanities**
 - ENG 101-102 Composition and Rhetoric 6
 - Literature Selectives 6
 - Humanities Selectives 6
 - Social Sciences**
 - HIS 103 or 104 American History 3
 - PSY 101 General Psychology 3
 - ECO 203 Introduction to Economics 3
 - SOC Elective 3
 - PSY or SOC Electives 6
 - HIS, GEO, or POS Electives 6
 - Science/Mathematics**
 - Science Electives including laboratory 8
 - MAT 101-102 College Algebra and Trigonometry or MAT 115-116 Modern Elementary Mathematics 6
 - CSC 150 BASIC Computer Concepts 3
 - (May elect advanced courses with demonstrated competence)
 - Health/Physical Education**
 - HED 300 Introduction to Health Education 3
 - PHE 102 Fitness and Weight Control 1
- II. **Professional Education** (24 hours minimum)
 - EDU 300 Foundations of Education 3
 - EDU 301 Human Development and Learning 3
 - EDU 330 Survey of Special Education 3
 - EDU 450 Career Education for the Exceptional Individual 3

EDU 452 Introduction to Teaching Exceptional Individuals	3
EDU 464 Language Development in the Exceptional Individual	3
EDU 468 Educational Diagnosis of the Exceptional Individual	3
EDU 480 Human Interaction in Teaching	3

III. Specialization (30 hours minimum)

Behavior Disorders

EDU 351 Children's Literature I or EDU 433 Literature for Adolescents	3
EDU 370 Behavior Management of the Exceptional Individual	3
EDU 417 Teaching Elementary School Science or EDU 440 Teaching Secondary School Sciences	3
EDU 422 Teaching Elementary School Mathematics or EDU 445 Teaching Secondary School Mathematics	3
EDU 426 The Teaching of Reading	3
EDU 457 Introduction to Behavior Disorders	3

Learning Disabilities

EDU 420 The Elementary School Curriculum or EDU 437 High School Curriculum	3
EDU 422 Teaching Elementary School Mathematics	3
EDU 426 The Teaching of Reading	3
EDU 492 Fundamentals of Learning Disabilities ..	3
EDU 493 Strategies for Educating the Learning Disabled	3
EDU 495 Programming for the Learning Disabled	3
EDU 566 Remedial Reading or EDU 569 Diagnosis and Remediation in Mathematics	3
Selectives approved by advisor	

Mental Retardation

EDU 370 Behavior Management of the Exceptional Individual	3
EDU 372 Vocational Education for the Mentally Retarded	3
EDU 422 Teaching Elementary School Mathe- matics or EDU 445 Teaching Secondary School Mathematics	3
EDU 426 The Teaching of Reading	3
EDU 456 Characteristics of the Mentally Retarded	3
EDU 461 Teaching the Mentally Retarded	3
EDU 467 Language Arts for the Mentally Retarded	3
EDU Selective (any special education course or 351, 433, 422, 491)	3

Severe/Profound Handicaps

EDU 370 Behavior Management of the Exceptional Individual	3
EDU 372 Vocational Education for the Mentally Retarded	3
EDU 456 Characteristics of the Mentally Retarded	3
EDU 470 Medical Aspects of Crippling Conditions	3

EDU 473 Curriculum for Severely Handicapped Individuals	3
EDU 474 Assessment and Programming for Severely Handicapped Individuals	3
EDU 475 Verbal and Nonverbal Communication for the Severely Handicapped	3
EDU 542 Parent Professional Partnership	3

IV. Clinical Experiences (18 hours minimum)

EDU 310 Practicum	3
EDU 485 Directed Student Teaching I	6
EDU 486 Directed Student Teaching II	6
EDU 490 Student Teaching Seminar	3

LIBRARY/MEDIA CERTIFICATION

The Division of Educational Services provides courses that lead to certification in library/media. Information concerning these courses may be obtained from the library/media core coordinator in this division.

DIVISION OF EDUCATIONAL STUDIES

SAMUEL CRAVER

Acting Division Chairman

James Bailey (Professor Emeritus)	Frances Briggs (Professor Emerita)
Rosemary Caffarella	Kathleen Cauley
Thomas Hephner	Vivien Ely
Gail Honea (Professor Emerita)	Fredric Linder
Carroll Londoner	James McMillan
Howard Ozmon	Walter Ramey
Trudy Rosenthal	Sally Schumacher
Ronald Sherron	Warren Strandberg

OCCUPATIONAL EDUCATION

The Division of Educational Studies offers a Bachelor of Science degree in occupational education to prepare teachers and trainers for secondary, post-secondary and non-school settings such as health care facilities, business and industry.

Health Occupations meets the needs of licensed or certified health care personnel such as nurses, dental assistants, medical assistants, respiratory therapists, and radiological technologists preparing to teach health occupations in secondary and post-secondary schools. Emphasis is on instructional methodology and education for those preparing to teach high school and adult students and/or need certification.

Marketing Education is designed for high school graduates, community college graduates and individuals with experience in marketing fashion merchandising, retailing, or other related business fields. Students may prepare for certification as marketing education teacher/

coordinators in the public schools or for training positions in non-school settings.

Non-School Option is available to individuals seeking employee training positions in business, industry, health care organizations, public agencies, and other professional settings. The program is designed to meet individual needs, building on previous educational and occupational experiences. Students prepare for such roles as hospital in-service instructors, technical trainers, and sales training personnel.

PROGRAM REQUIREMENTS IN OCCUPATIONAL EDUCATION (126 Hours Minimum)

I. General Education (54 hours minimum)	<i>Credits</i>
Humanities	
ENG 101-102 Composition and Rhetoric	6
Literature Elective	3
Humanities Elective	3
Social Sciences	
HIS 103 or 104 American History	3
PSY 101 General Psychology	3
Social Science Electives	6
Science/Mathematics	
Laboratory Science	4
MAT 101 College Algebra or MAT 111	
Basic Mathematics for Behavioral, Social, and Management Sciences	3
CSC 150 Basic Computer Concepts	3
Science/Mathematics Elective	3
Electives from Humanities, Social Sciences, Sciences, or Mathematics	13
Health/Physical Education	
HED 300 Introduction to Health Education	3
PHE 102 Fitness and Weight Control	1
II. Professional Education (9 credits minimum)	
EDU 300 Foundations of Education	3
EDU 301 Human Development and Learning	3
EDU Elective	3
III. Occupational Education (15 credits minimum)	
Required of all students:	
OED 301 Introduction to Occupational Education	3
OED 304 Instructional Planning and Evaluation for Occupational Education	3
OED 306 Instructional Methods in Occupational Education	3
OED 401 Occupational Education Program Planning and Management	3
Track Specific Courses: 3 credits required	
Health Occupations Track (School and Non-School)	
OED 407 Clinical Teaching in Health Occupations	3
Occupational Education Track (School)	
OED 409 School/Community Relationship in Occupational Education	3
Marketing Education Track (Non-School)	
EDU Elective	3

IV. Technical Education (30 credits minimum)

Professional/Technical Preparation 18
Approved electives and/or demonstrated professional/technical preparation which provide instruction related to the current procedures and practices in the occupational field in which student is preparing to teach.

Occupational Experience 12
Occupational employment experience demonstrating understanding of the personal and organizational issues and practices relevant to individual careers. Employment experiences must meet the required number of hours as specified by each track in the program. Competencies may be documented from previous or current employment experiences with advisor approval.

V. Clinical Experience (18 credits minimum)

School Option	
EDU 310 Practicum	3
EDU 485 Directed Student Teaching I	6
EDU 486 Directed Student Teaching II	6
EDU 490 Student Teaching Seminar	3
Post-Secondary/Non School Option	
EDU 310 Practicum or Elective	3
EDU 487 Supervised Non-school Experience I	6
EDU 488 Supervised Non-school Experience II	6
EDU 494 Topical Seminar	3
or	
EDU 400 Independent Study	3

Educational Studies

The Division of Educational Studies offers undergraduate courses that provide students with foundation studies needed for specialized work in education degree programs. All students majoring in education are required to take EDU 300 Foundations of Education and EDU 301 Human Development and Learning.

Faculty in the Division of Educational Studies serve as advisors to those students who are undecided program majors in the School of Education.

Vocational Education Certificate Program

The Vocational Education Certificate Program is designed for upgrading the Provisional Vocational Certificate to a renewable five-year Vocational Education Certificate (VEC). The program is offered at convenient off-campus locations by qualified vocational teacher educators. Course work is individually planned and contracted with the instructor in curriculum planning/development; laboratory/shop management; methods of teaching; program planning and evaluation; professional role and development; and technical update.

DIVISION OF HEALTH AND PHYSICAL EDUCATION

JACK SCHILTZ
Acting Division Chairman

George Borden	Jude Pennington
Robert Davis	LeEtta Pratt
George Dintiman	Elizabeth Royster
Deborah Getty	Patricia Stauffer
Barney Groves	Ronold Tsuchiya
David Magill	Wendy Wadsworth

The Division of Health and Physical Education offers a Bachelor of Science degree with majors in health education and physical education. Students majoring in either area may choose the school or nonschool teaching option. The *school option* prepares teachers for positions in school settings where state teacher certification is required. The program for physical education majors qualifies students to seek certification in health education as well as physical education. The health education program gives students the choice of qualifying for certification in physical education or general science in addition to health education. The *nonschool option* is for students who plan teaching careers in health facilities, industry, and other nonschool settings. Clinical placements in both health and physical education are arranged in settings that correspond to students' career objectives.

PROGRAM REQUIREMENTS IN PHYSICAL EDUCATION (129 hours minimum)

I. General Education (54 hours minimum)	Credits
Humanities	
ENG 101-102 Composition and Rhetoric	6
Literature	3
SPE 121 Effective Speech	3
Social Sciences	
HIS 103 or 104 American History	3
PSY 101 General Psychology	3
Social Science Electives	6
Science/Mathematics	
BIO 101, L101 General Biology	4
BIO 200 Biological Terminology	1
BIO 205 Human Anatomy	4
BIO 206 Human Physiology	4
Laboratory Science Elective	4
MAT 111 Basic Mathematics for Behavioral, Social, and Management Sciences	3
CSC 150 BASIC Computer Concepts	3
Health/Physical Education	
HED 300 Introduction to Health Education	3
PHE 102 Fitness and Weight Control	1
II. Professional Education (13 hours minimum)	
EDU 300 Foundations of Education	3
EDU 301 Human Development and Learning	3
PHE 310 Early Professional Experience	1
PHE 397 Methods in Physical Education	3
PHE 398 Curriculum in Physical Education	3
III. Physical Education (32 hours minimum)	
Theory (20 hours required)	

PHE 190 Introduction to Physical Education	2
PHE 391 Physical Education in Elementary School	3
PHE 392 Kinesiology	3
PHE 480 Safety, First Aid and Basic Life Support	3
PHE 492 Physiology of Exercise	3
PHE 493 Tests and Measurement in Physical Education	3
PHE 495 Adaptive and Corrective Physical Education	3
Skills (12 hours required from among the following)	
PHE 200 Strength Training	5
PHE 201 Endurance and Flexibility Training	5
PHE 202-3 Basketball I, II	1
PHE 204-5 Softball I, II	1
PHE 206 Football	5
PHE 208-9 Volleyball I, II	1
PHE 210-11 Field Hockey I, II	1
PHE 212-13 Soccer I, II	1
PHE 214 Wrestling	5
PHE 216-17 Tennis I, II	1
PHE 226 Recreational Games	5
PHE 227 Archery, Badminton, and Bowling	1
PHE 230-31 Gymnastics I, II	1
PHE 233 Track and Field	1
PHE 234 Rhythmics	1
PHE 236 Elementary Games	1

IV. Health Education (12 hour minimum)

HED 385 Administration of Health Programs	3
HED 387 Curriculum and Methods in Health	3
HED 430 Diseases of School Age Child or HED 487 Coping and Adaptation	3
HED 400 Human Nutrition Education, HED 410 Human Sexuality Education or HED 420 Drug Education	3

V. Clinical Experiences (18 hours minimum)

School Option:	
EDU 310 Practicum	3
EDU 485 Directed Student Teaching I	6
EDU 486 Directed Student Teaching II	6
EDU 490 Student Teaching Seminar	3
Non-School Option:	
EDU 310 Practicum	3
EDU 487 Supervised Nonschool Experience I	6
EDU 488 Supervised Nonschool Experience II	6
EDU 494 Topical Seminar	3

PROGRAM REQUIREMENTS IN HEALTH EDUCATION (129 Hours Minimum)

I. General Education (54 hours minimum)	Credits
Humanities	
ENG 101-102 Composition and Rhetoric	6
Literature	3
SPE 121 Effective Speech	3
Social Sciences	
HIS 103 or 104 American History	3
PSY 101 General Psychology	3
PSY 301 Child Psychology or PSY 302 Psychology of Adolescence	3
SOC 101 General Sociology	3
Science/Mathematics	
BIO 101 L101, General Biology and Laboratory	4

BIO 200 Biological Terminology.....	1
BIO 205 Basic Human Anatomy	4
BIO 206 Human Physiology.....	4
BIO 209 Medical Bacteriology.....	4
CHE 103 Introduction to Modern Chemistry.....	3
MAT 111 Basic Mathematics for Behavioral, Social, and Management Sciences	3
CSC 150 BASIC Computer Concepts	3
Health/Physical Education	
HED 300 Introduction to Health Education.....	3
PHE 102 Fitness and Weight Control	1

II. Professional Education (15 hours minimum)

EDU 300 Foundations of Education.....	3
EDU 301 Human Development and Learning.....	3
EDU 330 Survey of Special Education	3
EDU 401 Pupil Evaluation	3
EDU 407 Educational Media Utilization	3

III. Health Education (27 hours minimum)

HED 384 Safety Education.....	3
HED 385 Administration of Health Programs.....	3
HED 386 School and Community Health Resources	3
HED 387 Curriculum and Methods in Health Education	3
HED 400 Human Nutrition Education	3
HED 410 Human Sexuality Education.....	3
HED 420 Drug Education.....	3
HED 430 Diseases of the School-age Child	3
HED 487 Coping and Adaptation.....	3

IV. Clinical Experiences (18 hours minimum)

School Option	
EDU 310 Practicum	3
EDU 485 Directed Student Teaching I	6
EDU 486 Directed Student Teaching II.....	6
EDU 490 Student Teaching Seminar	3
Nonschool Option:	
EDU 310 Practicum	3
EDU 487 Supervised Nonschool Experience I	6
EDU 488 Supervised Nonschool Experience II.....	6
EDU 494 Topical Seminar	3

DIVISION OF TEACHER EDUCATION

ALAN McLEOD
Division Chairman
Stanley Baker
Mary Brittain
Edward Caffarella
Michael Davis
William Goggin
James Hodges
Michael Lohr
Alice Pieper
Richard Rezba
William Swyers
John Van de Walle

Nancy Boraks
Doris Busby
Virginia Crowe
Patricia Duncan
Ena Gross
Brian Holtz
John Oehler
Daisy Reed
Judy Richardson
Martin Tarter
Esther Zaret

The Division of Teacher Education provides preservice preparation for teachers of students in elementary, middle, and secondary schools. Programs are available which lead to certification as early childhood, middle-grade, and secondary school teachers.

A student begins a degree program in elementary or secondary teacher education through meetings with an advisor assigned by the division. This advisor-advisee relationship is maintained throughout the period of study at the university. A student and his/her advisor are expected to play major roles in the development of the student's individual program. As part of the program-planning process students have an opportunity to explore, identify, and clarify their personal and professional needs.

Students enrolled in the programs are expected to be involved in both on-and off-campus activities. Field-based activities are basic to all teacher education programs. Included as clinical experiences are both school and community activities. Teaching and learning in the program will include both directed and independent studies.

PROGRAMS IN ELEMENTARY EDUCATION: EARLY CHILDHOOD AND MIDDLE EDUCATION

These programs are designed to prepare teachers for preschool, elementary, and middle school teaching. Prospective teachers learn to help children develop the knowledge, skills, attitudes, and values which form the basis for lifelong learning.

The Early Childhood program focuses on the preparation of teachers to work with children from infancy through age eight. Upon completion of this program, students are eligible to be certified for teaching preschool and lower elementary grades.

The Middle Education program is directed toward preparing teachers for children in the transition years between the ages of nine and fourteen. Students completing this program can be certified to teach in the upper elementary and middle school grades. They are required to have discipline concentrations of 15 semester hours each in two of the following areas: language arts, mathematics, science, and social science.

PROGRAM REQUIREMENTS IN ELEMENTARY EDUCATION (124 Hours Minimum)

I. General Education (54 hours minimum)	<i>Credits</i>
Humanities	
ENG 101-102 Composition and Rhetoric	6
Literature	3
SPE 121 Effective Speech or SPE 408 Speech for Teachers	3
AEN 301 Art for Elementary Teachers	3

(required for early childhood majors) or any art course in foundations, history or education	
MUE 481 Music for Elementary Classroom Teachers	3
(required for early childhood majors) or any music course in theory, literature or education	
Social Sciences	
HIS 103 or 104 American History	3
PSY 101 General Psychology	3
ECO 203 Introduction to Economics	3
Geography	3
Science/Mathematics	
Life Science	3
Physical Science	3
Science lab taken with one science course	1
MAT 115-116 Modern Elementary Mathematics or MAT 101-102 College Algebra and Trigonometry	6
CSC 150 BASIC Computer Concepts	3
Health/Physical Education	
HED 300 Introduction to Health Education	3
PHE 102 Fitness and Weight Control	1
Selectives	
Electives from humanities, social sciences, sciences, or mathematics	4

II. Professional Education and Clinical Experiences (54 hours minimum)

EDU 300 Foundations of Education	3
EDU 301 Human Development and Learning	3
EDU 321 Exploring Teaching	6
EDU 417 Teaching Science in Elementary and Middle Schools	3
EDU 426 Teaching of Reading	3
EDU 427 Diagnostic Reading in the Classroom with Practicum	3
EDU 491 Teaching Social Studies in Elementary and Middle Schools	3
PHE 390 Physical Education for Elementary Teachers	3
Early Childhood Program	
EDU 322 Planning for Teaching Early Childhood ..	6
EDU 351 Children's Literature	3
EDU 422 Teaching Elementary School Mathematics	3
EDU 485 Directed Student Teaching I: Kindergarten	3
EDU 485 Directed Student Teaching I: Primary ..	3
EDU 486 Directed Student Teaching II: Primary ..	6
EDU 490 Student Teaching Seminar	3

Middle Education Program

EDU 325 Planning for Teaching Middle Education	6
EDU 351 Children's Literature or EDU 433 Adolescent Literature	3
EDU 423 Teaching Mathematics for Middle Education	3
EDU 485 Directed Student Teaching I: 4-8	6
EDU 486 Directed Student Teaching II: 4-8	6
EDU 490 Student Teaching Seminar	3

III. General Electives (16 hours minimum)

Middle Education majors should choose electives that enable them to have discipline concentrations of 15 hours each in two of the following areas: language arts, mathematics, science or social science.

PROGRAMS IN SECONDARY EDUCATION

The programs in secondary education provide pre-service preparation for prospective secondary school teachers. Programs are available in biology, business, chemistry, drama, English, French, German, history and social studies, mathematics, physics, science, and Spanish. Leading to a Bachelor of Science degree, these programs are administered by the Teacher Education Division of the School of Education, but are conducted in cooperation with departments in the College of Humanities and Sciences, the School of the Arts, and the School of Business. Added endorsements are available in earth science, English as a Second Language, journalism, and speech.

Degree programs in secondary education require a minimum of 124 semester hours. These credits are distributed in general education, professional education, clinical education, and a program area. Required credits in each category vary according to the degree area. Upon admission to the degree program in secondary education, each student is assigned an advisor who assists the student in program planning.

Each program in secondary education is competency-based. Students can meet competency requirements by taking university courses. It is possible, however, to meet competency requirements in other ways (for example, CLEP, College Board Examination Advance Placement Tests, and departmental competency tests). The student's advisor will help the student determine the best means for accomplishing required competencies.

PROGRAM REQUIREMENTS IN SECONDARY EDUCATION (124 Hours Minimum)

I. General Education (54 hours minimum)	<i>Credits</i>
Humanities	
ENG 101-102 Composition and Rhetoric	6
Literature	3
Humanities Elective	3
Social Science	
HIS 103 or 104 American History	3
PSY 101 General Psychology	3
Social Science Electives	6
Science/Mathematics	
Laboratory Science	4
MAT 101 College Algebra or MAT 111 Basic Mathematics for the Behavioral, Social, and Management Sciences	3
CSC 150 BASIC Computer Concepts	3
Science/Mathematics Electives	3-4

Electives from the humanities, social sciences sciences, or mathematics.	12-13
Health/Physical Education	
HED 300 Introduction to Health Education.	3
PHE 102 Fitness and Weight Control.	1

II. Professional Education and Clinical Experiences (30 hours minimum)

EDU 300 Foundations of Education.	3
EDU 301 Human Development and Learning.	3
EDU 310 Practicum.	3
EDU 437 High School Curriculum.	3
EDU 440, 441, 442, 445, or 543 Teaching Secondary School Science, English, Social Studies, Mathematics, or Foreign Languages.	3
EDU 485 Directed Student Teaching I.	6
EDU 486 Directed Student Teaching II.	6
EDU 490 Student Teaching Seminar.	3
EDU 438 Secondary School Methods.	3
(Required for History/Social Studies majors only)	

III. Program Area (minimum hours vary as listed)

English.	39
French*.	36
German*.	
Mathematics.	41
Sciences (Combination of mathematics and science courses).	62
Social Science.	58
Spanish*.	36
*Students majoring in a foreign language are en- couraged to take 24 hours in a second language.	

COURSES IN EDUCATION ADULT EDUCATION (ADE)

402 How Adults Learn. Semester course; 3 lecture hours. 3 credits. Overview of the adult as a learner. Topics include how and what adults learn, why adults participate in learning, and major barriers to learning for adults. Implications for teachers/trainers of adults are explored.

EDUCATION (EDU)

100 Reading and College Study Skills. Semester course; 2 lecture and 2 laboratory hours. 3 credits. A study of effective reading and study skills at the college level. Emphasis is placed on vocabulary development as well as reading and study strategies.

101 Advanced Reading, Study, and Communication Skills. Semester course; 3 lecture and laboratory hours. 3 credits. Prerequisite: EDU 100, advisor's recommendation, or instructor's permission. A study of advanced reading and study skills at the college level. Students develop and apply critical reading-thinking skills, library research skills, and advanced vocabulary.

200 Education in American Society. Semester course; 3 lecture hours. 3 credits. No prerequisite. An elective course for noneducation majors, including those who may be exploring careers in education. An examination of the complex nature of our American educational system and various societal influences on that system. The course will include an exploration of some critical issues affecting the future of American education, on-site visits to educational insti-

tutions, and other field experiences in settings that will permit exploration of career options.

203 Focus on Choice. Semester course; 3 lecture hours. 3 credits. A career planning experience for adults focusing on discontinuity in life patterns and a review of current educational and occupational opportunities. Consideration of the world of work, fields of education and volunteer service, and the development of one's own potential will be featured.

300 Foundations of Education. Semester course; 3 lecture hours. 3 credits. The historical, sociological, and philosophical backgrounds of educational theories and practices. The aim of the course is to help the student develop a basic understanding of education in the modern world.

301 Human Development and Learning. Semester course; 3 lecture hours. 3 credits. A study of human development through the life span with special emphasis on child and adolescent psychology, the nature of learning, and basic concepts of learning theories.

305/PSY 305 Educational Psychology. Semester course; 3 lecture hours. 3 credits. The application of psychological principles to the teaching-learning process, with special emphasis on theories of learning and development.

307/English 307 Teaching Writing Skills. Semester course; 3 lecture hours. 3 credits. A study of the methods for teaching writing to students in middle and secondary schools. Students will learn to teach the basic skills of grammar and mechanics as well as the more advanced skills of planning, writing, and revising papers. They will also practice these skills in their own writing.

310 Practicum. 3 credits. Prerequisite: admission to Clinical Teacher Education. A field placement that precedes student teaching (EDU 485, 486) or the nonschool supervised experience (EDU 487, 488). Includes planned observations, tutorials and small group involvement.

321 Exploring Teaching. Semester course; 6 credits. Prerequisite: Admission to *Teacher Preparation*. Observations and interactions with children, teachers, and educational principles of learning and instructional development; teaching as a social art, style of instruction, and humanistic and artistic self-expression. The course will include directed field experiences and in-class university study.

322 Planning for Teaching (Early Childhood). Semester course; 6 credits. Prerequisite: Admission to *Clinical Teacher Education*. A study of the early childhood programs and the elementary school. An emphasis on curriculum development and the study of the process of applying principles and techniques of teaching in all areas of learning in the elementary school. The selection, preparation, and use of media, material, and equipment will be emphasized. Extensive off-campus activities integrated with on-campus classes and seminars.

325 Planning for Teaching and Practicum (Elementary Education). Semester course; 6 credits. Prerequisite: Admission to *Clinical Teacher Education*. A study of the elementary school. An emphasis on curriculum development and the study of the process of applying principles and techniques of teaching in all areas of learning in the elementary school. The selection, preparation, and use of media, materials, and equipment will be emphasized. Extensive off-campus activities integrated with on-campus classes and seminars.

330 Survey of Special Education. Semester course; 3 lecture hours. 3 credits. Pre/co-requisite for all other undergraduate special education courses. For majors and non-majors. An overview of the field of special education. Includes current trends, legal issues, definitions, etiology, identification, characteristics, and appropriate services for children and adults with a range of exceptionalities.

351 Children's Literature I. Semester course; 3 lecture hours. 3 credits. Designed to give students an appreciation of values of children's literature; includes biography, fable, myth, traditional and modern fanciful tales, and poetry; as well as a survey of the history of children's literature.

370 Behavior Management of the Exceptional Individual. Semester course; 3 lecture hours. 3 credits. A discussion of principles and strategies used to manage the behavior of exceptional individuals. Students will learn how to develop, implement, and evaluate a behavior management program for all handicapped persons.

372 Vocational Education for the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. Provides information relevant to developing and implementing vocational programs for the mentally retarded. Includes vocational assessment, community job assessment, employer communication, instructional techniques, and job placement. Covers related work skills such as social and leisure skills, training, and community survival skills.

400 Independent Study. Semester course; 1-6 hours. 1-6 credits. Opportunities are provided for supervised research and independent study in selected areas. Designed for advanced students. All work offered on an individual basis with the approval of instructor and departmental chairman.

401 Pupil Evaluation. Semester course; 3 lecture hours. 3 credits. Principles and procedures of evaluation of pupil growth in cognitive, affective, and psychomotor domains for a prospective classroom teacher; construction and analysis of teacher-made tests and other formal and informal assessment procedures; interpretation and use of criterion-referenced and norm-referenced standardized tests in measuring group and individual achievement.

407 Educational Media: Utilization. Semester course; 3 lecture hours. 3 credits. The study and use of audio-visual equipment and aids, and means for using them for more effective presentations to groups.

417 Teaching Science in Elementary and Middle Schools. Semester course; 3 lecture hours. 3 credits. Emphasis on methods and techniques for developing instruction that reflects the three aspects of science – product, processes, and values. Attention is given to curriculum organization, current practices, and trends in elementary and middle school science education.

420 The Elementary School Curriculum. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 300 and 301 or 302. The historical and philosophical background of the modern elementary school; its organization, functions, and recent developments in programs and activities.

422 Teaching Elementary School Mathematics. Semester course; 3 lecture hours. 3 credits. Methods and techniques used to teach mathematics in elementary school. Background material, course content, and modern uses of mathematics will be stressed to give the teacher a better understanding of this subject area.

423 Teaching Mathematics for Middle Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: MAT 115 or 101. Emphasis on current instructional strategies, learning theories, and manipulative materials appropriate for teaching mathematics to children. The content focus is on grades 4 to 8. A development approach to this content includes some consideration of topics from the primary grades.

426 The Teaching of Reading. Semester course; 3 lecture hours. 3 credits. An analysis of instructional programs with emphasis on developmental reading. It incorporates a review of research, curriculum issues, and instructional procedures related to the programs of reading in instructional schools and agency settings.

427 Diagnostic Reading in the Classroom with Practicum. 3 hours. 3 credits. Prerequisites: EDU 426 or 549 and Admission to *Clinical Teacher Education*. Designed for those planning to be classroom teachers. Explores strategies for evaluating reading ability and progress. Procedures appropriate for differentiation of instruction within the classroom are reviewed and practiced in a field setting.

433 Literature for Adolescents. Semester course; 3 lecture hours. 3 credits. Designed to acquaint the prospective secondary school English teacher with the nature, scope, and uses of adolescent literature. The student is acquainted with reading materials for meeting the varied needs and interests of adolescents.

437 High School Curriculum. Semester course; 3 lecture hours. 3 credits. A study of the background and objectives of the modern high school. Basic issues and current trends in curriculum construction and revision are examined.

438 Secondary School Methods. Semester course; 3 lecture hours. 3 credits. The application of principles and techniques of teaching in the high school. Emphases include understanding the adolescent, the learning process, the motivation of learning, and the evaluation of the teaching-learning process.

440 Teaching Secondary School Sciences. Semester course; 2 lecture and 3 laboratory hours. 3 credits. Prerequisite: upper-division science education major. A treatment of principles and techniques of teaching high school science. Emphases include philosophy of science teaching, appropriate learning principles, curriculum innovations, and diverse methods as applied to the field of science. The interrelationship of the sciences will also be stressed.

441 Teaching Secondary School English. Semester course; 3 lecture hours. 3 credits. Development and organization of English instruction with specific attention to methodology, equipment, materials, and resources.

442 Teaching Secondary School Social Studies. Semester course; 3 lecture hours. 3 credits. Examines (1) the demands involved in secondary social studies instruction; (2) preparatory approaches to using academic and professional insights in confronting the demands; and (3) the formulation and implementation of appropriate methodological approaches.

445 Teaching Secondary School Mathematics. Semester course; 3 lecture hours. 3 credits. Development and organization of mathematics instruction with specific attention to methodology, equipment, materials, and resources.

450 Career Education for Exceptional Individuals. Semester course; 3 lecture hours. 3 credits. Develops the basic understandings needed to enhance learning through guidance and career/vocational education at all age levels. Focuses on resources and techniques for use by educational personnel.

452 Teaching Exceptional Individuals. Semester course; 3 lecture hours. 3 credits. The study of basic remedial methods and/or modification procedures for curriculum and instruction with exceptional individuals. Focuses on factors influencing instruction, perspectives on curriculum, approaches to instruction, and implementation of instructional plans.

453 Teaching Secondary School Foreign Languages. Semester course; 3 lecture hours. 3 credits. Development and organization of foreign language instruction with specific attention to the methodology, laboratory, and classroom equipment, materials, and resources.

456 Characteristics of the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. A study of the nature and needs of the mentally retarded. Explores the medical, biological, and physical aspects of mental retardation, causes of retardation, and introductory assessment and instructional techniques.

457 Introduction to Behavior Disorders. Semester course; 3 lecture hours. 3 credits. Surveys both the characteristics of emotional and behavior disorders and the various educational programs used to serve these children and youth.

458 Characteristics of Physically Handicapped. Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 451. Exploration of a variety of childhood health problems which have physical, psychological, social, and educational impact on children, their families, communities, and schools. Emphasis is understanding multiple handicapped children with implications for rehabilitation and teaching.

459 Teaching the Physically Handicapped. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 458 and 470. Curriculum development, special materials, and classroom organization of multiple grade classes for physically handicapped children in day schools and clinical settings. Instructional procedures for the homebound child will be considered.

461 Teaching the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 451 and 456 or permission of instructor. Curriculum development and organization of activities for the mentally retarded at different maturational levels with specific attention to program content, equipment, materials, and resources. Taken concurrently with EDU 310.

464 Language Development in Exceptional Individuals. Semester course; 3 lecture hours. 3 credits. Study of normal language development and how language acquisition is affected by various exceptionalities. Examines assessment techniques and processes and teaching strategies.

467 Language Arts for the Mentally Retarded. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 451 and 456. A study of the communication problems of the mentally retarded at different maturational levels and techniques for developing appropriate curricular emphasis in the total program.

468 Educational Diagnosis of Exceptional Individuals. Semester course; 3 lecture hours. 3 credits. Study and simu-

lation of basic assessment techniques and their use in determining the nature and extent of learning problems in educational placement decisions and in individual program development and implementation.

469 Social Skills Development of Behavior Disordered Pupils. Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 457. An in-depth and experiential study of techniques and skills used by the teacher in the behavior disordered classroom, including group development, affective education, life space interviewing, and peer influence. Students must be concurrently enrolled in practicum.

470 Medical Aspects of Crippling Conditions. Semester course; 3 lecture hours. 3 credits. Survey of medical conditions and special health problems as they relate to educational planning and programming. Etiology, prognosis, and effects of disabling conditions are discussed by medical specialists. Teacher-physician relationships are explored. Planning for both the child and the environment to meet special needs is included.

471 Instructional Planning for Behavior Disordered Pupils. Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 457. Provides instruction in curriculum, methods, and materials for teaching behavior disordered/emotionally disturbed pupils in grades K-12. Prepares students to teach pupils in public, private, and residential settings. Restricted to students majoring in behavior disorders or by permission of instructor.

473 Curriculum for Severely Handicapped Individuals. Semester course; 3 lecture hours. 3 credits. Focuses on evaluation and design of curricula and materials for severely handicapped individuals.

474 Assessment and Programming for Severely Handicapped Individuals. Semester course; 3 lecture hours. 3 credits. Focuses on assessment, instruction, and evaluation of severely handicapped students. Emphasis is placed on design and implementation of individual instructional programs.

475 Verbal and Nonverbal Communication for Severely Handicapped. Semester course; 3 lecture hours. 3 credits. Prepares teachers to assess verbal and nonverbal communication skills of severely handicapped individuals and to design, implement, and evaluate communication programs. Includes basic manual communication and other electronic and manual nonverbal communication systems.

476 Methods for Residence Hall Assistants. Semester course; 3 lecture hours. 3 credits. Prerequisite: serve in VCU residence halls or permission of instructor. Course designed primarily to present resident assistants and others with student development concepts, peer assistance and helping skills, and group techniques. Residence halls will be used as primary learning laboratories.

480 Human Interaction in Teaching. Semester course; 3 lecture hours. 3 credits. The course focuses on interpersonal relationships and communications between teachers, students, parents, and administrators. Communication and consultation skills are developed through role playing and simulations. Affective and personality variables in teacher-student interactions are explored.

485 Directed Student Teaching I. 6 credits. Prerequisite: admission to EDU 310 or equivalent with a grade of "C" or better and recommendation of practicum supervisor. A class-

room teaching experience in a public school or other approved setting which includes opportunities for increasing involvement with children. Culminates in full responsibility for planning, implementing, and evaluating classroom activities.

486 Directed Student Teaching II. 6 credits. Prerequisite: admission to EDU 310 or equivalent with a grade of "C" or better, and recommendation of practicum supervisor. A classroom teaching experience in a public school or other approved setting which includes opportunities for increasing involvement with children. Culminates in full responsibility for planning, implementing, and evaluating classroom activities.

487 Supervised Nonschool Experiences I. 6 credits. Prerequisites: completion of EDU 310 or equivalent with a grade of "C" or better, recommendation of practicum supervisor, and satisfaction of eligibility requirements for student teaching. Does not satisfy student teaching or certification requirements. A practical experience in a community agency or other approved non-school setting which provides for the efficient application of knowledge, ideas, and skills related to one's occupational objective. Culminates in full responsibility for planning, implementing, and evaluating activities.

488 Supervised Nonschool Experiences II. 6 credits. Prerequisite: completion of EDU 310 or equivalent with a grade of "C" or better, recommendation of practicum supervisor, and satisfaction of eligibility requirements for student teaching. Does not satisfy student teaching or certification requirements. A practical experience in a community agency or other approved non-school setting which provides for the efficient application of knowledge, ideas and skills related to one's occupational objective. Culminates in full responsibility for planning, implementing, and evaluating activities.

490 Student Teaching Seminar. 3 lecture hours. 3 credits. Group study of topics, issues, problems related to teaching, learning, and development of children as these relate to student teaching.

491 Teaching Social Studies in Elementary and Middle Schools. Semester course; 3 lecture hours. 3 credits. Emphasis on methods and techniques for developing knowledge, skills, attitudes and values, and social action in the elementary and middle grades. Attention is given to curriculum organization, current practices, and trends in social studies education.

492 Fundamentals of Learning Disabilities. Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 330 or permission of instructor. A beginning course focusing on the etiology and characteristics of the learning disabled; the influence of interdisciplinary history and theory on the field; and the range of service delivery systems developed by the profession as well as legal and legislative mandates. Field observations with the learning disabled will be required.

493 Strategies for Educating the Learning Disabled. Semester course; 3 lecture hours. 3 credits. Prerequisite: EDU 492 and 452 or permission of instructor. An intensive study of the specialized formal and informal diagnostic techniques used with learning disabled students and of the variety of materials and methodologies appropriate to LD curriculum from preschool through secondary school. Special attention is given to skills needed to match the charac-

teristics diagnosed with specific techniques to develop individualized prescriptive programs. Must be taken concurrently with one or more credits of Education 310 Practicum.

494 Topical Seminar in Education. Semester course; 1-3 variable credits, repeatable up to 6 credits. A seminar intended for group study by personnel interested in examining topics, issues, or problems related to the teaching, learning, and development of students.

495 Programming for the Learning Disabled. Semester course; 3 lecture hours. 3 credits. Prerequisites: EDU 493 and 468 or permission of instructor. A review of principles and procedures for using diagnostic information and individualized methodology in the development of prescriptive programs for learning disabled individuals. Case materials and simulations will be used to develop the skills in organization, programming, management, and consultation required for effective teaching at various age levels. Must be taken concurrently with one or more credits of EDU 310 practicum.

HEALTH EDUCATION (HED)

300 Introduction to Health Education. Semester course; 3 lecture hours. 3 credits. An introduction to the five dimensions of health emphasizing personal application. This course will acquaint the student with professional opportunities in the field of health education.

384 Safety Education. Semester course; 3 lecture hours. 3 credits. This course includes basic principles of accident causation and prevention in the home, school, community, and industrial settings. Course work will also include standard first aid and basic life support (cardiopulmonary resuscitation).

385 Administration of Health Programs. Semester course; 3 lecture hours. 3 credits. A review of school and community health programs that emphasizes administration.

386 School and Community Health Resources. Semester course; 3 lecture hours. 3 credits. The purpose of this course is to acquaint the student with school and community resources available to assist in teaching health education. It includes a practicum experience.

387 Curriculum and Methods in Health Education. Semester course; 3 lecture hours. 3 credits. This course includes curriculum and methods in health education emphasizing objectives, unit planning, and lesson planning. The student will have an individual teaching experience including video taping.

400 Human Nutrition Education. Semester course; 3 lecture hours. 3 credits. The major goal of this course is to provide learning opportunities which enable this student to acquire a practical and useful knowledge based in the sound principles of applied human nutrition. It will emphasize nutritional needs through the cycles of life providing information which will enhance the student's own lifestyle, and give the student experience in interpreting nutritional information for the public. The student will be able to apply methodology skills to the nutritional content area.

405 Adolescent Medical and Social Problems. Semester course; 3 lecture hours. 3 credits. Seminar designed to acquaint individuals working with an age group from 12 to 21 years old with the normal physiological and psychological development and medical and adjustment problems.

410 Human Sexuality Education. Semester course; 3 lecture hours. 3 credits. Principles, methods, and content of sex education programs. Designed for teachers and counselors who are concerned with helping children and adolescents understand their sexuality.

420 Drug Education. Semester course; 3 lecture hours. 3 credits. An introductory course in drug use information for health educators, emphasizing the safe and appropriate use of prescription drugs and non-prescription drugs in the overall treatment of illness. Didactic presentations will focus on principles and concepts of drug action and therapeutic indications for selected drugs and drug classes. Drug abuse, drug dependence rehabilitation methods, and prevention programs will also be discussed. The student will be able to apply educational methodologies to this content area.

430 Diseases of the School-Age Child. Semester course; 3 lecture hours. 3 credits. This class will cover units in communicable disease, nutritional disease, prevention (immunizations), developmental abnormalities, congenital defects, the handicapped child, and adolescent medicine.

487 Coping and Adaptation. Semester course; 3 lecture hours. 3 credits. This course includes coping with divorce, aging, dying, death loss, and suicide. It emphasizes coping with stress and successful adaptation to common life crisis events.

OCCUPATIONAL EDUCATION (OED)

300 Occupational Experience. Semester course; 6 credits, repeatable to a maximum of 12 credits. Occupational employment experience demonstrating understanding of the personal and organizational issues and practices relevant to individual careers. Experience must meet the required number of hours as specified by each track in the program. Competencies may be documented from previous or current employment experience.

301 Introduction to Occupational Education. Semester course; 3 lecture hours. 3 credits. An overview of occupational education in secondary, post-secondary, and non-school settings. Introduction to occupational education and its functions. Includes the development of communication skills important to occupational personnel. Examines strategies for development of growth and service to teachers/trainers.

304 Instructional Planning and Evaluation for Occupational Education. Semester course; 3 lecture hours. 3 credits. The planning and evaluation of instructional content with emphasis on developing and evaluating a unit of instruction.

306 Instructional Methods in Occupational Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: OED 304 or permission of instructor. Organization and delivery of instruction in an occupational area. Emphasis on how individuals learn, instructional methodology, and effective teaching. Learners receive practical experience and feedback.

400 Designed for upgrading the Provisional Vocational Certificate to a renewable five-year Vocational Education Certificate (VEC). Course work is individually planned and contracted with the instructor in curriculum planning/development, laboratory/shop management, methods of teaching, program planning and evaluation, professional role, and development or technical update.

401 Occupational Program Planning and Management. Semester course; 3 lecture hours. 3 credits. The teacher's/trainer's role in planning and management of secondary, post-secondary, and non-school based occupational education programs will be examined. Topics include needs analysis; developing and managing staffing, budgeting, promoting, record-keeping, and general program planning activities; program evaluation.

402 Laboratory Management in Occupational Education I. Semester course; 3 lecture hours. 3 credits. Prepares teachers for planning, equipping, organizing, and managing instruction in an occupational education laboratory. Includes field-based experiences.

407 Clinical Teaching in Health Occupations. Spring semester; 3 lecture hours, 3 credits. Comprehensive planning for efficient and effective use of clinical sites. Emphasizes the coordination of integration of theoretical and clinical learning. Topics include contracts, consent, risk management, and professional conduct.

409 School and Community Relationships in Occupational Education. Semester course; 3 lecture hours. 3 credits. Examines the coordination function, the vocational student organization, student recruitment, program promotion, community surveys, student/employer follow-up, and communication with local and state agencies. Develops the skills required for maintaining successful relationships with the various communities that support vocational education in the public schools.

PHYSICAL EDUCATION (PHE)

Service Program Open to All University Students:

- 100 Experimental Physical Education (1 credit)
- 101 Foundations of Physical Conditioning: Jogging, Weight Training, Swimming, Yoga as specified (1 credit)
- 102 Fitness and Weight Control (1 credit)
- 103 Adapted Physical Education (1 credit)
- 104 Adapted Physical Education (1 credit)
- 106 Fencing (1 credit)
- 107 Badminton (1 credit)
- 108 Gymnastics Survey (1 credit)
- 109 Racquetball (1 credit)
- 110 Handball (1 credit)
- 112 Tennis (1 credit)
- 113 Wrestling (1 credit)
- 114 Bowling (1 credit)
- 115 Rugby (1 credit)
- 116 Archery (1 credit)
- 117 Golf (1 credit)
- 121 Self Defense: Karate or Judo (1 credit)
- 122 Advanced Self Defense: Karate (1 credit)
- 125 Basketball (1 credit)
- 126 Flag Football (1 credit)
- 127 Field Hockey (1 credit)
- 128 Soccer (1 credit)
- 129 Lacrosse (1 credit)
- 137 Volleyball (1 credit)
- 138 Team Handball (1 credit)
- 139 Track and Field (1 credit)
- 150 Beginning Swimming (1 credit)
- 151 Intermediate Swimming (1 credit)
- 155 Scuba Diving (1 credit)
- 156 Synchronized Swimming (1 credit)

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- 157 Springboard Diving (1 credit)
- 158 Aquatic Sports and Games (1 credit)
- 250 Advanced Life Saving (1 credit)
- 251 Water Safety Instructors (1 credit)
- 356 Organization and Administration of Aquatic Activities (1 credit)

Professional Skill Courses. Required for physical education majors. Open to other students when space is available:

- 200 Strength Training (.5 credit)
- 201 Endurance and Flexibility Training (.5 credit)
- 202–203 Basketball I and II (1 credit)
- 204–205 Softball I and II (1 credit)
- 206 Football (.5 credits)
- 208–209 Volleyball I and II (1 credit)
- 210–211 Field Hockey I and II (1 credit)
- 212–213 Soccer I and II (1 credit)
- 214 Wrestling (.5 credit)
- 216–217 Tennis I and II (1 credit)
- 226 Recreational Games (.5 credit)
- 227 Archery, Badminton and Bowling (1 credit)
- 230–231 Gymnastics I and II (1 credit)
- 233 Track and Field (1 credit)
- 234 Rhythmic (1 credit)
- 236 Elementary Games (1 credit)

Professional Education Courses in Physical Education:

190 Introduction to Physical Education. Semester course; 2 lecture hours. 2 credits. Overview of the professional aspects of physical education in our society, philosophical and scientific principles of physical education, professional organizations and literature, and career possibilities and qualifications.

300 Coaching. Semester course; 2 laboratory hours. 1 credit. A coaching theory course in a selected sport with practical application in the form of field work.

325 Treatment of Athletic Injuries. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: BIO 205. Theory and techniques for the prevention, recognition, referral, and follow-up care of injuries in physical education and athletics.

380 Principles of Accident Prevention. Semester course; 3 lecture hours. 3 credits. This course is designed to provide information on the magnitude of the accident problem in the nation. Special attention is given to concepts and theories of accident prevention, particularly as they relate to use of highways.

382 Introduction to Driver Education. Semester course; 3 lecture hours. 3 credits. An introduction to the vehicle operator's task within the highway transportation system: driver task analysis. A current automobile operator's permit is required.

390 Physical Education for Elementary Teachers. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Methods and curriculum planning in physical education for the elementary school classroom teacher and physical education specialist. Included are analysis of movement, games, and activities suitable for the elementary school child.

391 Teaching Elementary School Physical Education. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Designed to enhance knowledge of elementary physical education through an analysis of the aims, goals, objectives, programs, and teaching methods. Construction of year-round curriculum and daily lesson plans. Emphasis also

placed upon the acquisition of administrative and organizational knowledge dealing with facilities, equipment, teaching aids, testing, measurement, and safety.

392 Kinesiology. Semester course; 3 lecture hours. 3 credits. Prerequisite: BIO 205 or permission of instructor. A study of the anatomical, physiological, and physical aspects of human motion with application to the analysis of physical activities.

397 Methods in Physical Education. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Methods, materials, techniques, and skills in teaching secondary physical education.

398 Curriculum in Physical Education. Semester course; 3 lecture hours. 3 credits. Curriculum planning for secondary school physical education programs.

425 Advanced Athletic Training. Semester course; 3 lecture hours. 3 credits. The course is designed to give the student knowledge of and experience with physical examination, diagnostic testing, and identification of athletic injury, including orthopedic evaluation techniques of specific injuries. This includes an understanding of the anatomical and biomechanical basis of joint motion. The course will include lecture, slide presentation, and practical experience.

426 Therapeutic Modalities and Rehabilitative Techniques. Semester course; 3 lecture hours. 3 credits. This course is designed to provide students with an understanding of the theory and practical application of physical and exercise modalities commonly used in athletic training. The student is also exposed to methods of rehabilitation for specific injuries and surgery, determination of criteria for return to competition, treatment procedures for specific injuries, and methods of fabrication of protective splints and pads. The course will include lecture, slide presentation, practical experience and guest lecturers.

430 Seminar in Gymnastics for Teachers. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Prerequisite: teaching experience in the field or permission of instructor. Designed to cover all facets of a gymnastic program from the typical physical education class to varsity coaching.

439 The Organization, Administration, and Supervision of the Intramural Sports Program. Semester course; 2 lecture and 2 laboratory hours. 3 credits. Experiences in the organization and administration of an intramural sports program. Lecture will be devoted to the theory, philosophy, history, and plans for the conduct of an intramural sports program. Laboratory experience will be obtained by working in intramural programs.

480 Safety, First Aid, and Basic Life Support. Semester course; 3 lecture hours. 3 credits. This course includes American Red Cross and/or American Heart Association certification in Multimedia Standard First Aid and Basic Life Support (cardiopulmonary resuscitation). In addition, basic principles of accident causation and prevention are presented.

482 Methods in Driver Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHE 382. This course is designed to provide driver education instructional principles and methodology.

492 Physiology of Exercise. Semester course; 3 lecture and 1 laboratory hour. 3 credits. Prerequisite: BIO 206. Physi-

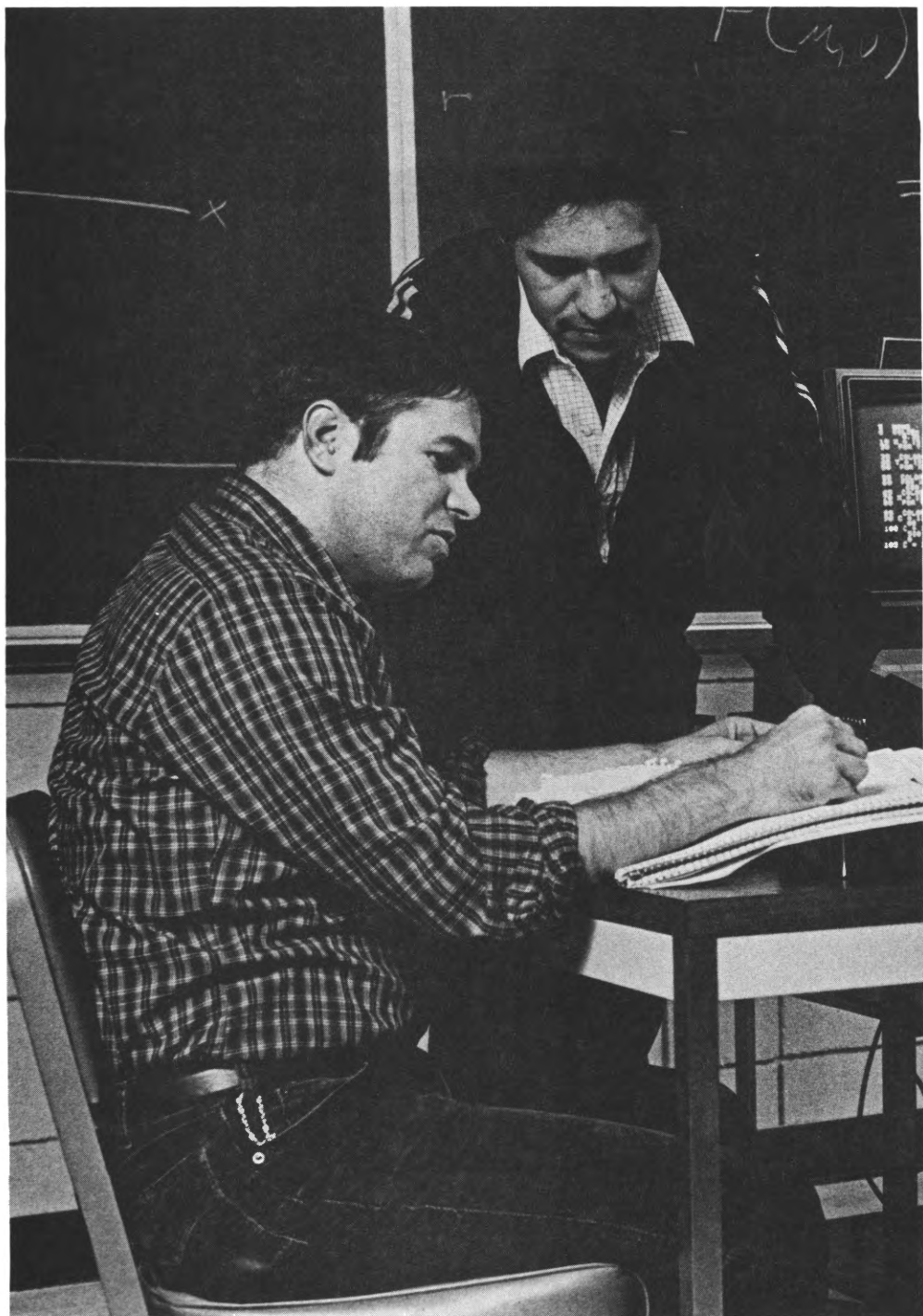
ological changes in the human organism resulting from exercise, investigation of recent research in diet, drugs, fatigue, cardiovascular/respiratory fitness, conditioning programs for various age groups, and the effects of exercise upon various components of physical fitness and health. Application of specific problems to physical education programs. Laboratory experience in the use of research instruments.

493 Tests and Measurement in Health and Physical Education. Semester course; 3 lecture hours. 3 credits. Prerequisites: MAT 111 and STA 213. Selecting, administering, scoring, and evaluating tests in the areas of general motor educability, specialized skills, and knowledge tests. Scientific test construction and basic statistical analysis. Application of competencies demonstrated by completion of project requiring the administration and evaluation of one or

more tests, review of the literature, analysis of data, and presentation of conclusions and recommendations.

495 Adaptive and Corrective Physical Education. Semester course; 3 lecture hours. 3 credits. Prerequisite: PHE 492. A course designed to provide physical educators with methods of teaching those with permanent physical disabilities, placing emphasis on kinds and degrees of anatomical and physiological limitations

499 Organization and Administration of Physical Education. Semester course; 3 lecture hours. 3 credits. Equipment and facilities, routine procedures, budgets and finance, legal liability, public relations, scheduling, and organizing the physical education class program and extracurricular activities.



Graduate programs are administered by individual departments and schools with assistance from the School of Graduate Studies.

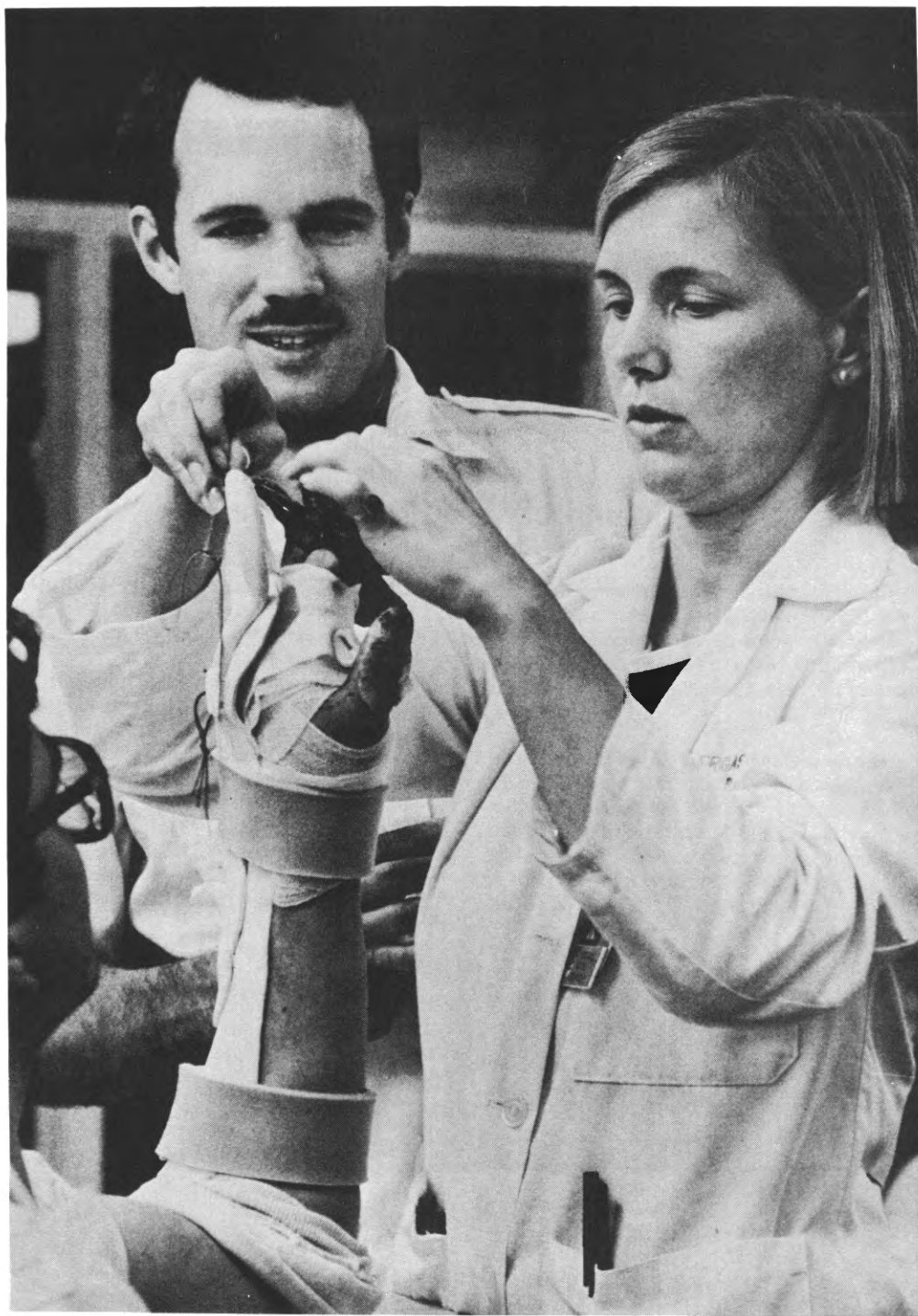
PART XIV—School of Graduate Studies

Before enrolling in graduate courses, students should consult the school in which they intend to take courses. In some programs, credit for courses will not apply to a VCU graduate degree unless the student has been admitted previously to a degree program.

Degree-seeking Graduate Students. For information about admission to graduate programs, students should consult the *VCU Graduate Bulletin* or contact the School of Graduate Studies. Questions concerning graduate school standards should be addressed to the Dean of Graduate Studies, 1101 East Marshall Street, Room 1-018,

Box 568, Richmond, VA 23298-0001, (804) 786-0347.

New Non-Degree Seeking Graduate Students. New students not admitted to a VCU graduate program, but who hold a baccalaureate degree, may enroll as non-degree-seeking which includes verification of residency and eligibility and written permission from the school(s) in which they intend to take courses. Please note that enrollment in some graduate courses is restricted to degree-seeking students or majors only. For information about admission as a non-degree-seeking student, students should contact the School of Graduate Studies at (804) 786-0347.



Applicants to the School of Medicine are accepted after completing a baccalaureate degree in biology, chemistry, or physics.

PART XV — School of Medicine

The School of Medicine was founded in 1838 and is the oldest and largest school on the Medical College of Virginia Campus. The school offers a program leading to the Doctor of Medicine degree and provides post-M.D. training for approximately 500 residents and interns in the university's 1,000-bed Medical College of Virginia Hospitals and the McGuire Veterans Ad-

ministration Medical Center. In addition the Department of Pathology of the School of Medicine offers a graduate program in pathology leading to the Master of Science and Doctor of Philosophy degrees. Additional information on the programs offered by the School of Medicine may be found in the Virginia Commonwealth University *Medical College of Virginia Bulletin*.



The School of Nursing's baccalaureate degree program provides learning opportunities, a sound body of knowledge, and skills essential to the professional practices of nursing, which may be used as a basis for advanced study.

PART XVI — School of Nursing

JOAN FARRELL
Dean
ETHELYN E. EXLEY
Assistant Dean, Academic Affairs
BARBARA A. MARK
Assistant Dean, Research and Program Development

The School of Nursing originated in 1893 as part of the University College of Medicine. Since then, the program has evolved from a three-year diploma program to an upper density baccalaureate program for generic students as well as those students who are already registered nurses seeking completion of the B.S. degree.

ACCREDITATION

The baccalaureate degree program in nursing for students with no previous preparation in nursing and for graduates of diploma and associate degree programs is accredited by the National League for Nursing Department of Baccalaureate and Higher Degree Programs. The program is approved by the Virginia State Board of Nursing, and graduates are eligible to take the licensing examinations for registration.

ACADEMIC ADMISSION REQUIREMENTS

Applicants for admission must either be eligible for readmission or must be in good standing at the college last attended. Usually only those credits earned within ten years preceding admission will be considered for transfer. In addition, credits must be applicable toward a

degree at the institution in which they were earned.

A minimum of 60 semester credits from an accredited two- or four-year institution with a quality-point ratio equivalent of 2.3 is required; however, a ratio of 2.5 on a 4.0 scale is recommended. Computation of the quality-point average utilizes academic courses only.

	<i>Credits</i>
COMMUNICATIONS	6
Required: English composition	3
Elective: speech and/or literature	3
HUMANITIES:	12
Elective: history, philosophy, logic, literature, art, music, drama, religion, or foreign language	
SOCIAL SCIENCES	12
Required: general psychology	3
developmental psychology	3
general sociology	3
family	3
NATURAL SCIENCES	19-22
Required: general chemistry	8
human anatomy and physiology	5-8
microbiology	3
nutrition	3
MATHEMATICS	3
Statistics preferred, algebra or computer science courses accepted	
OTHER ELECTIVES	5-8
No more than three credits in an activity course accepted	
Total	60

Registered Nurse Applicants. The School of Nursing provides an opportunity for registered

nurses to be admitted to the baccalaureate program. Graduates from state-approved diploma programs and associate degree programs in nursing, who are currently licensed to practice, may be admitted for part- or full-time study. The same lower-division prerequisites are required of the registered nurse student as of the generic students.

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

JUNIOR AND SENIOR YEAR CURRICULUM

<i>Junior Year, First Semester</i>	<i>Credits</i>
NUR 301 Introduction to Nursing (First Block).....	6
NUR 320 Medical-Surgical Nursing I (Second Block) ..	6
PIO 365 Pathophysiology I	3
PMC 381 Principles of Pharmacology	<u>3</u>
	18

<i>Junior Year, Second Semester</i>	
NUR 340 Parent-Child Nursing (First Block).....	6
NUR 350 Psychiatric Mental Health Nursing (Second Block)	6
NUR 341 Applied Human Nutrition	3
NUR 368 Pathophysiology II.	<u>3</u>
	18

<i>Senior Year, First Semester</i>	
NUR 430 Health Care of Women	6
NUR 410 Community Health Nursing	6
NUR 401 Health Assessment.	3
NUR 472 Dimensions of Professional Nursing	<u>3</u>
	18

<i>Senior Year, Second Semester</i>	
NUR 421 Medical-Surgical Nursing II (First Block).....	6
NUR 422 Leadership and the Nursing Process (Second Block)	6
NUR 471 Managerial Theory for Nursing Practice	3
Elective	<u>2-3</u>
	17-18

The School of Nursing reserves the right to restrict enrollment in clinical courses to matriculated nursing students seeking a Bachelor of Science degree. Enrollment in all clinical nursing courses is based on availability of space in these courses.

The following is a typical curriculum plan for the RN student who passes all proficiency examinations satisfactorily.

<i>Summer Session</i>	
NUR 302 Concepts for Nursing Practice	6
NUR 401 Health Assessment.	<u>3</u>
	9

<i>Fall Semester</i>	
NUR 470 Concepts Basic to Professional Accountability Within the Health Care System.....	6
NUR 410 Community Health Nursing	<u>6</u>
	12

<i>Spring Semester</i>	
NUR 421 Leadership and the Nursing Process.....	6
Elective	<u>2-3</u>
	8-9

For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the School of Nursing, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.



The School of Pharmacy provides scientific and professional background for both those who will directly enter the practice of pharmacy and those who will continue on to graduate education.

PART XVII—School of Pharmacy

JOHN S. RUGGIERO

Dean

GRAHAM C. WINDRIDGE

Assistant Dean

C. EUGENE WHITE

Assistant Dean of Students

WERNER LOWENTHAL

Director of Continuing Education

The School of Pharmacy of the Medical College of Virginia, Virginia Commonwealth University, was officially established in 1898. The original two-year program was replaced by a three-year program in 1925. In 1932 the program was lengthened to four years and the B.S. degree awarded upon its completion. The curriculum for the Bachelor of Science in pharmacy degree was extended to five years in 1960.

The pharmacy curriculum prepares students for one of several career paths. Most graduates practice in the familiar role of the community pharmacist, as owner or employee, who dispenses prescriptions and provides advice on drug use and other health care matters to the general public. An increasing number of pharmacists, however, practice in hospitals where activities may involve dispensing, consulting with physicians and patients, or management. Some graduates are employed by the pharmaceutical industry in research, production, quality control, sales, or management. Opportunities also exist in various governmental agencies as pharmacists, researchers, and members of regulatory bodies.

ACADEMIC ADMISSIONS REQUIREMENTS

Two years of liberal arts study from an accredited two-or four-year institution with a minimum of 65 semester credits is required.

	<i>Credits</i>
Biology (Lecture and Laboratory)	8
General Chemistry (Lecture and Laboratory)	8
Organic Chemistry (Lecture and Laboratory)	8
Physics (Lecture and Laboratory)	8
English	6
Mathematics (algebra and trigonometry)	6
Economics	3
Electives (Liberal Arts or Behavioral Sciences)	18
	<hr/> 65

For information about additional requirements for admission and the specific procedures for application for admission, please consult the *Medical College of Virginia Bulletin* or contact University Enrollment Services/Admissions, Medical College of Virginia, Virginia Commonwealth University, Box 632, Richmond, VA 23298-0001.

THIRD, FOURTH, AND FIFTH YEAR CURRICULUM

THIRD YEAR

	<i>Credits</i>
<i>Fall Semester</i>	
PHA 301 Principles of Pharmacy	4.5
ANA 401 Human Anatomy	4.5
PHA 311 Introduction to Pharmacy Law	1

PHA 331 Introduction to Pharmacy Practice	3
PHC 302 Medicinal Chemistry	<u>3</u>
	16

Spring Semester

PHA 302 Principles of Pharmacy	5
BIC 402 Biochemistry	5
PIO 482 Physiology	4
PHC 410 Principles of Pharmaceutical Analysis	<u>3</u>
	17

FOURTH YEAR*Credits**Fall Semester*

PHA 401 Principles of Pharmacy	3.5
MIC 401 Microbiology	4.5
PHA 403 Pharmacy Practice Management	3
COE 510 Communication Skills	1
PHC 403 Medicinal Chemistry	4
PMC 403 Pharmacology	<u>4</u>
	20

Spring Semester

PHA 402 Principles of Pharmacy	3.5
PHA 411 Clinical Pharmacy and Therapeutics	4
PHA 406 Applied Pharmacy Practice Management	2

COE 510 Communication Skills	1
PHC 404 Medicinal Chemistry	3
PMC 404 Pharmacology	<u>4</u>
	17.5

FIFTH YEAR*Credits**Fall Semester*

PHA 505 Pharmacy Law	3
PHA 511 Clinical Pharmacy and Therapeutics	5
PHA 533 Nonprescription Medication	2.5
COE 510 Communication Skills	1
PHA 442 Drug Literature Evaluation	2.5
Electives	<u>4-6</u>
	18-20

Spring Semester

PHA 512 Professional Practice Clerkships	17
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For additional information about the undergraduate and graduate programs and requirements for promotion and graduation in the School of Pharmacy, please consult the *Medical College of Virginia Bulletin* or the *Graduate Bulletin*.



Education in the School of Social Work is highly individualized and is characterized by a close relationship between faculty and students.

PART XVIII—School of Social Work

GRACE E. HARRIS

Dean

DAVID P. FAURI

Associate Dean

BEVERLY B. KOERIN

Assistant Dean

MORDEAN TAYLOR-ARCHER

Director, Student Affairs

EDWARD A. McSWEENEY

Director, Baccalaureate Program

FLORENCE Z. SEGAL

Director, Continuing Education

Martin D. Adler

Alice L. Barber

Brent Benda

David Beverly

Martin Bloom

Leon Chestang

Frederick A. DiBlasio

Hans S. Falck

Robert G. Green

Marcia Harrigan

Anita Horwitz

Lionel C. Lane

Robert W. Peay

Frances Rapheal

Amy Rosenblum

David N. Saunders

Charlotte S. Schrieberg

C. Bernard Scotch

Mark J. Singer

Eva Sutton

Mabel G. Wells

Dorothy I. Ansell

Joyce O. Beckett

Suzanne Bentley

Marilyn Biggerstaff

Thomas O. Carlton

King E. Davis

Elizabeth Dungee-Anderson

Anne Fortune

Julia Hall

Veronica H. Hawkins

Rosa Jimenez-Vazquez

Jaclyn Miller

Dennis Poole

Jane Reeves

Edna F. Roth

Robert L. Schneider

Martin Schwartz

James R. Seaberg

Dale Sonnenberg

Ruby C. Walker

Claire W. Wompierski

munity manpower needs to work with World War I veterans and their social and health problems. Subsequent development of the school has expanded activity into all areas of human service. The School of Social Work is the oldest of its kind in the south.

With the creation of Virginia Commonwealth University in 1968, the School of Social Work was established as a unit of the university's Academic Campus. The Raleigh Building at 1001 West Franklin Street houses faculty offices, a student lounge, and conference rooms.

Social workers are committed to the enhancement of social functioning and to the promotion of social justice. To achieve these goals, social workers provide services to individuals, families, groups, communities, and organizations; plan and administer the delivery of social services; and advocate positive social and institutional change. Social work education provides the knowledge, skills, and value base for these professional activities.

Social work education at VCU is highly individualized and is characterized by a close relationship between faculty and student. The faculty helps students learn the form and method of social work practice, and students are encouraged to discover their own unique style of helping. The educational programs are designed to prepare students for practice in many different kinds of social agencies. The combination of classroom courses and concurrent field work experiences facilitates integration of knowledge,

The School of Social Work was established in 1917 as the Richmond School of Social Work and Public Health, and it later became the first unit of Richmond Professional Institute. The school developed initially in response to com-

attitudes, and skills necessary for professional practice. The integrated class and field work curriculum offers opportunities for students to acquire a substantial base in (1) social work practice; (2) the patterns of individual, group, and community behavior as they interact with each other and the social milieu; (3) the development, organization, and operation of social welfare programs and policies; (4) the methods of scientific inquiry in social work; and (5) the needs of special populations.

The Cooperative Education Program is available to qualifying students in the School of Social Work who are pursuing undergraduate degrees. A full description of the program appears on page 281 of the *Bulletin*.

BACCALAUREATE SOCIAL WORK PROGRAM

The School of Social Work offers a Bachelor of Social Work degree to prepare graduates for beginning professional practice in social work. The B.S.W. program is accredited by the Commission on Accreditation of the Council on Social Work Education.

The objectives of the B.S.W. Program are

1. to enable students, through an integrated curriculum, to demonstrate the knowledge and skills essential for the beginning practice of social work with individuals, families, groups, and communities,
2. to enable students, as responsible professionals, to criticize and analyze current knowledge and practice skills in relation to the values and ethics of the social work profession,
3. to sensitize students through classroom emphasis, field instruction and special programs, to the challenge of understanding and confronting differences of racial, ethnic, and cultural background,
4. to increase student understanding of both individual prejudice and institutionalized forms of oppression that affect specific population groups, including those distinguished by racial and ethnic status, gender, sexual orientation, age, and disability, and
5. to prepare students for graduate education.

The pre-professional courses in this program are usually taken in the first two years of college study. This constitutes a sound liberal arts base for professional social work practice. The prescribed curriculum for students who enter the

program at the freshman or sophomore level is as follows:

	Credits	
	1st Sem.	2nd Sem.
<i>First Year</i>		
ENG 101 Composition and Rhetoric . . .	3	—
ENG 102 Composition and Rhetoric . . .	—	3
PSY 101 General Psychology	3	—
SOC 101 General Sociology	3	—
Social/Behavioral Elective	3	3
MAT 111 or Math 101	—	3
ANT 103 Cultural Anthropology	—	3
Electives	3	3
	15	15
<i>Second Year</i>		
SLW 201 Introduction to Social Work . .	3	—
PHI 221 Critical Thinking	3	—
BIO 101 and L101, General Biology . .	4	—
BIO 102 and L102, General Biology . .	—	4
SLW 230 Communication in the Helping Process and Lab	—	3
CSE 241 Community Analysis	—	3
PSY 304 Developmental Psychology . .	—	3
Soc/Behavioral Science Elective	3	3
Electives	3	—
	16	16

JUNIOR YEAR

Admission to the professional courses offered in the junior year is contingent upon the student's having obtained a minimum grade of "C" in SLW 201 Introduction to Social Work, and in SLW 230 Communication in the Helping Process and the laboratory which accompanies it; and the approval of an admissions committee. A cumulative "C" average (2.0 on a 4.0 point scale) in all hours previously attempted is normally expected. The prescribed curriculum for the junior year is as follows:

	Credits	
	1st Sem.	2nd Sem.
<i>Third Year</i>		
SLW 311 Social Discrimination	3	—
SLW 313 Person in Society	3	—
SLW 321 Development of Social Welfare	3	—
Humanities Elective	3	3
SLW 331 Social Behavioral Theory for Social Work Practice	—	3
SLW 332 Social Work Practice Fundamentals	—	3
¹ SLW 393 Supervised Social Work Practice	—	4

¹Admission to field work (SLW 393 Supervised Social Work Practice) is contingent upon a committee's decision that the student has a sufficient grasp of the knowledge and skills taught in this curriculum to be able to meet practice requirements.

Electives	<u>3</u>	<u>3</u>
	15	16

SENIOR YEAR

The prescribed senior curriculum is as follows:

	Credits	
	1st Sem.	2nd Sem.
<i>Fourth Year</i>		
SLW 441 Social Work Practice: Individuals, Families, and Groups ...	3	—
SLW 494 Supervised Social Work Practice	4	—
SLW 452 Social Work Practice: Organizations and Communities	—	3
SLW 495 Supervised Social Work Practice	—	4
SLW 490 Research in Social Work	3	—
SLW 422 Social Welfare Legislation and Services	3	—
Electives	<u>3</u>	<u>6</u>
	16	13

Students must earn a "C" or above in attempted 200-level social work courses prior to entering 300-level social work courses, and must earn a "C" or above in attempted 300-level social work courses prior to entering 400-level social work courses. Students must have a "C" or above in all required social work courses prior to graduation.

Transfer of credits from other colleges or universities and/or from other programs at VCU is determined on an individual basis.

A minimum of 122 credits is required for the Bachelor of Social Work degree.

MINOR IN SOCIAL WELFARE

A minor in social welfare is available to non-social work majors. The minor shall consist of 18 credits, including SLW 201, Introduction to Social Work, SLW 321, Development of Social Welfare, and SLW 422, Social Welfare Legislation and Services. The remaining nine credits may be fulfilled by completing SLW 230 and 230L, 311, 313, 331, 481, 486, or 490.

STUDENT ASSOCIATION

The Baccalaureate Social Work Student Association, an organization of students enrolled in the B.S.W. Program, was established for the purpose of facilitating communication among students and between the student body and the school. This organization plays a vital role in the

educational process. Participation in the decision-making process is accomplished through student representation on committees within the school. In addition, the association enables students to conduct a variety of social and professional activities throughout the year.

GRADUATE SOCIAL WORK PROGRAMS

The school offers a Ph.D in social policy and social work and a two-year graduate professional curriculum for social work leading to the Master of Social Work degree. Additional M.S.W. options are available to selected groups of students. These include part-time study, advanced-standing study for selected graduates of accredited undergraduate programs in social work, a cooperative program with the Presbyterian School of Christian Education, a dual degree in law and social work in collaboration with the University of Richmond Law School, the M.S.W./Certificate in Aging Studies option, School of Social Work certification, as well as institutes, continuing education offerings, and workshops. The Master of Social Work program is accredited by the Commission on Accreditation of the Council on Social Work Education. A description of the master's degree program may be found in a separate bulletin. A copy of the *VCU Graduate Bulletin* may be obtained by writing University Enrollment Services, Graduate Admissions, 821 West Franklin Street, Box 2526, Richmond, VA 23284-0001.

COURSES IN SOCIAL WORK (SLW)

101 Social Work As A Helping Profession. Semester course; 3 lecture hours. 3 credits. Freshman introductory survey of the need for and the nature of social work as a helping profession. Focus is on the distinctiveness of the profession of social work. Provides opportunity to examine interests in being a helping professional.

201 Introduction to Social Work. Semester course; 3 lecture hours. 3 credits. Systematic overview of the social work profession. Begins the process of professional socialization, both through class content and required service experience. Knowledge of the nature of social work, the fields of social work practice, target populations, overview of social work methods.

230 Communication in the Helping Process. Semester course; 2 lecture hours. 2 credits. Study of the values, knowledge, and skills of effective human communication and interpersonal relations as necessary for planned change with individuals, groups, families, and communities. Includes observation, collection, and description of data, and verbal and nonverbal communication, and their relevance to social work practice. Social work majors must take SLW 230

concurrently with SLW L230. SLW L230 is strongly recommended as a concurrent course for nonmajors.

L230 Communication in the Helping Process Laboratory. Semester course; 2 laboratory hours. 1 credit. May be taken only concurrently with SLW 230. Laboratory provides systematic training in the skills of effective interpersonal communication.

311 Social Discrimination. Semester course; 3 lecture hours. 3 credits. Examines selected concepts from the social and behavioral sciences as to the etiology and effects of institutional discrimination and individual prejudice as related to social work practice. The impact of discrimination upon individuals and groups is studied with special attention given to blacks, women, and the aged in this society. Concepts studied are applicable to other disadvantaged groups.

313 Person in Society. Semester course; 3 lecture hours. 3 credits. Required of all undergraduate social work majors. Prerequisite: PSY 304. The course uses theoretical concepts from the behavioral sciences as background for understanding and assessing the social functioning of individuals and families in their social environment. It is designed to help students integrate theory with assessment skills associated with basic social work practice. Emphasis is placed on the social systems approach and problem-solving model as tools in analyzing the impact of various social problems on individual and family dynamics.

321 Development of Social Welfare. Semester course; 3 lecture hours. 3 credits. Traces the development of the institution of social welfare from the English Poor Law tradition to the beginnings of the modern welfare state. Analyzes public and private responses to the economic and social needs of the population in the context of values, social structure, economic change, and political response.

331 Social and Behavioral Theory for Social Work Practice. Semester course; 3 lecture hours. 3 credits. Required of all undergraduate social work majors. Prerequisite: SLW 313. This course builds on the fundamental concepts and theories about human behavior discussed in the prerequisite SLW 313. It examines and assesses the behavior of groups, organizations, and social institutions. Factors such as race, social class, social conflict, and social change are explored to enhance understanding of the diverse ways in which structural arrangements and institutional patterns affect human behavior.

332 Social Work Practice: Fundamentals. First of a three-semester sequence. Semester course; 3 lecture hours. 3 credits. Open only to social work majors with junior status or by permission of instructor. Prerequisites: SLW 201, 230, and 313. Co-requisite: SLW 393. This course is designed to introduce students to the basic concepts of beginning-level professional social work practice. Special attention will be given to interviewing, relationship building, problem identification and assessment, and goal planning, and application of concepts to the concurrent field practice.

393 Supervised Social Work Practice. First of a three-semester sequence. Semester course; 4 credits. 13 hours per week in agency. Open only to majors with junior status. Prerequisite: SLW 313. Co-requisite: SLW 332. Directed practice in a community agency under the supervision of an

agency field instructor. Emphasis on ability to initiate a professional relationship; define problems, goals, and intervention strategies. Beginning identification as a professional social worker.

422 Social Welfare Legislation and Services. Semester course; 3 lecture hours. 3 credits. Analyzes social welfare policy as related to social values, social problems, and social structures. Examines frameworks for policy analysis and for evaluation of programmatic outcomes of policy, with application to contemporary social service and income maintenance policies and delivery systems. Considers the economic, political, and ideological factors and processes which affect social welfare legislation, financing, and implementation.

441 Social Work Practice: Individuals, Families, and Groups. Second of a three-semester sequence. Semester course; 3 lecture hours. 3 credits. Prerequisites: SLW 332, 393. Co-requisite: SLW 494. Review of problem identification and assessment. Emphasis on the action phase of the problem-solving process with individuals, families, and groups. Development of intervention skills, referral, termination, and evaluation. Use of case material from concurrent field work practice to facilitate integration of learning.

452 Social Work Practice: Organizations and Communities. Semester course; 3 lecture hours. 3 credits. Prerequisites: SLW 441, 494. Co-requisite: SLW 495. Extends techniques of social work intervention to large systems. Emphasis on the use of influence, teamwork, and change in communities and organizations. Consideration of issues confronting the social worker in beginning social work practice. Use of case material from concurrent field work practice to facilitate integration of learning.

481 Issues in Social Welfare. Semester course; 3 lecture hours. 3 credits. A senior seminar designed to identify issues of concern to students as beginning professionals and to discuss etiology of and options to existing legislation or practice. Students will demonstrate evidence of their ability to analyze issues of their concern with the class.

486 Child Welfare Services. Semester course; 3 lecture hours, 3 credits. Examines the varieties of services to children, both in their homes and in various institutions, with special emphasis on the child as a member of a family. The role of the social worker in these programs is examined with some emphasis on adequate services, innovative services, and improving services.

490 Research in Social Work. Semester course; 3 lecture hours. 3 credits. Basic research concepts and methodologies for knowledge development, program evaluation, and evaluation of social work practice. Presents phases of the research process in social work: problem identification, group and single-case designs, data collection techniques, sampling, data analysis procedures, significance testing, and the ethics of social work research.

492 Independent Study. Semester course; 1, 2, 3 lecture hours. 1, 2, 3 credits. Prerequisites: junior or senior standing and permission of instructor. Under supervision of a faculty advisor, whose consent is required to register, study a topic of concern to the student. Each student must present his/her findings in writing or pass an oral examination.

494-495 Supervised Social Work Practice. Continuous course; 13 or 26 laboratory hours. 4 or 8 credits. Prerequisite: permission of instructor. Directed practice in a community agency under the supervision of an agency field instructor.

The course is intended to develop knowledge, values, and social work practice skills appropriate to entry-level practice in human service agencies.



VCU's commitment to provide for the special needs of adults and professional groups in its educational programming is carried out through the Division of Continuing Studies and Public Service.

PART XIX — Division of Continuing Studies and Public Service

HOWARD L. SPARKS
Vice Provost
NORMAN L. HILLIARD
Executive Director

The mission statement of Virginia Commonwealth University makes clear the commitment of the university to provide for the special needs of adults and professional groups in its educational programming.

Since 1920 VCU has fulfilled this mission by offering many courses and degree programs through its evening and continuing studies programs. The Division of Continuing Studies and Public Service has major responsibility for the development, coordination, and conduct of the university's continuing studies activities.

Major program areas of the Division of Continuing Studies and Public Service are
Evening, Summer, and Off-campus Studies
Nontraditional Studies
International Studies
Professional Continuing Education
University Advising Center
Cooperative Education
Media Instruction

In addition to the staff of the division, there is a director of continuing education in each of the university's schools. These persons are responsible for coordinating the continuing education activities of their various schools, and they serve as liaisons between the schools and the division.

The schools and their directors are

School of the Arts	Robert F. Hester
College of Humanities and Sciences	David W. Hartman
School of Business	Howard Mead
School of Community and Public Affairs	Gary Johnson
School of Education	Thomas Hephner
School of Social Work	Florence Segal
School of Allied Health Professions	Jennie Seaton
School of Basic Sciences	Hugo Seibel
School of Basic Health Sciences	Hugo Seibel
School of Dentistry	F. B. Wiebusch
School of Medicine	R. B. Young
School of Nursing	Jewel Calderon
School of Pharmacy	Werner Lowenthal

EVENING STUDIES, SUMMER STUDIES, AND OFF-CAMPUS CREDIT

ROZANNE G. EPPS
Director
SUE MUNRO
Assistant Director
SHIRLEY PARK
Assistant Director, Off-Campus Credit Courses

The Evening and Summer Studies Office works with academic schools of the university to coordinate courses offered during times other than the usual academic year and the traditional school day.

Evening Studies

In the fall of 1985, 5,075 students registered for VCU evening classes, joining more than 5,000 day students who chose to take part of their classes in the late afternoon or evening.

Many departments make it possible for working students to earn their degrees completely in the evening, but VCU also has many non-degree-seeking "special" students in evening classes. Evening Studies welcomes both the individual who presents the equivalent of a high school diploma and the person with a Ph.D. who wishes to continue his or her formal education. The ages of the students in evening classes range from 18 to over 65.

Flexible scheduling includes classes in the evening, during the late afternoon, on weekends, during Christmas vacation, and in the summer. Credit earned in the evening is the same as that earned in the day program.

Although there is no limit placed on the number of credits that may be earned in the evening, students may apply for degree-seeking status through University Enrollment Services. They are encouraged to do so early as a way of avoiding loss of credits. A bulletin of evening offerings is available by writing to the Director of Evening Studies, Virginia Commonwealth University, 901 West Franklin Street, Box 2523, Richmond, VA 23284-0001.

Summer Studies

The variety and flexibility of VCU's educational program is especially evident during the summer. In 1985, 7,876 students studied at VCU during the summer.

Summer students come to take classes, to learn new skills, to expand their fields of study, to keep their professional skills up-to-date, and to seek intellectual refreshment.

Summer classes are planned around various sessions of three, four, five, six, eight, and nine weeks and even some one-week workshops. During the summer months, classes are beginning and ending almost every week. Good students who plan to devote their summer to study can put together a proper combination of various sessions and earn up to 15 credits in the 13 weeks of summer sessions.

Announcements of VCU summer offerings are made each spring in a special tabloid section of the *Richmond Times-Dispatch* and are available upon request from the Summer Studies Office, Virginia Commonwealth University,

901 West Franklin Street, Box 2523, Richmond, VA 23284-0001.

Off-Campus Credit Instruction

The university provides numerous opportunities for part-time off-campus study both in the adjacent urban community and throughout the state. Off-campus credit classes feature the same course work that is available on-campus, and off-campus courses are fully degree-applicable within the normal standards of the various schools of the university.

Many of VCU's off-campus courses are offered in response to an expression of need from various groups within the state. VCU may thus be found offering courses in education for public school teachers at a local high school or serving employees of a local business organization with on-site credit instruction.

Other classes are offered on a continuing basis and serve specific educational needs in various geographical areas throughout the state.

NONTRADITIONAL STUDIES

NICHOLAS A. SHARP

Director

META R. BRAYMER

Assistant Director

The Office of Nontraditional Studies coordinates the administration and delivery of three major education programs: the Bachelor of General Studies, the Master of Interdisciplinary Studies, and the noncredit public service courses.

The Bachelor of General Studies Program

The Bachelor of General Studies program is a university degree program designed for mature adult students. It offers flexibly scheduled, highly individualized curricula leading to a Bachelor of General Studies (B.G.S.) degree. Through individualized advising, the program helps adults define their educational goals and design interdisciplinary curricula drawing on a variety of course offerings. Working with the Capital Consortium for Continuing Higher Education, the program can, when appropriate, help students to include the instructional resources of Virginia State University, Richard Bland College, John Tyler Community College, and J. Sargeant Reynolds Community College as part of their individualized degree programs.

To achieve a Bachelor of General Studies

degree all students must accumulate at least 124 hours of credit with at least a 2.0 cumulative grade-point average, including at least 45 semester hours of upper-division credit. The following constitute the program requirements.

Competencies

1. *Writing. 6–9 crs.* ENG 101-102 Composition and Rhetoric (by course or placement with a minimum grade of C or equivalent in each course) and one upper-division course in expository writing or demonstrated competency. (Competency may be demonstrated by the presentation of extensive writing samples to the coordinator of the Bachelor of General Studies program. Competency will be judged by the director of composition and rhetoric and/or the coordinator of the Bachelor of General Studies Program.)
2. *Mathematics. 6 crs.* Six credits in lower-division MAT, CSC, or logic (PHI 221, 222) courses. Three credits may be waived for students whose Mathematics Placement Test places them above the level of MAT 101 and who complete a subsequent MAT or CSC course.

General Education

A minimum of 24 hours to be completed as follows: at least six hours must be selected from each of three of the following groups—1, 2, 3, or 4. The remaining six hours may be selected from any group. Up to six hours in one category may also be applied to the focus area.

1. *Literature:* literature courses in English or foreign literature in English translation or in the original language.
2. *History, Culture, or Foreign Language:* courses in history, foreign language (not FLT), philosophy, religious studies, or European culture.
3. *Natural Science:* courses in biology, chemistry, physics, and other introductory laboratory sciences.
4. *Human Behavior and Institutions:* courses from selected departments in the College of Humanities and Sciences and the Schools of Social Work, Community and Public Affairs, Education, and Allied Health.
5. *Ethics:* courses in ethics (PHI 211 or 212, 231, 327, 328, 329, or POS 341).
6. *Arts:* Any course in the School of the Arts or PHI 421, 422.

Focus Area

The individually designed interdisciplinary focus area requires a minimum of 36 semester

hours credit, including at least 24 semester hours of upper-level credit.

Electives

A maximum of 49 semester credits of electives.

The last 30 hours of credit must be taken at VCU or 15 may be taken at VCU and 15 from other institutions in the Capital Consortium. At least 24 hours must be taken after acceptance in the program; 12 of these must be in the focus area. Twenty-one of the junior-senior level hours must be from VCU. No more than one-half the degree may be from a two-year college, and B.G.S. students may have no more than 31 hours of business courses, including transfer courses.

To enter the program, students must be adults who have already acquired at least 30 semester hours of formal credit through some form of college-level study, who have an overall 2.0 grade-point average, and who have educational goals compatible with the objectives of the B.G.S. Program.

Students admitted to the B.G.S. Program have a variety of credit options, including CLEP examinations, credit for formal military training and for certain professional certifications. Students may also be eligible for portfolio evaluation, which is available in selected disciplines. The portfolio identifies, articulates, and documents learning gained outside the classroom and demonstrates conceptual as well as practical knowledge. Faculty members evaluate the portfolios.

For additional information contact the Assistant Director, Nontraditional Studies, Virginia Commonwealth University, 901 West Franklin Street, Box 2515, Richmond, VA 23284-0001.

INTERNATIONAL STUDIES

BARBARA SPEE PERRINS

Director

In today's increasingly interdependent world it is essential that education in the United States have a strongly international dimension. VCU is committed to providing educational opportunities with an international perspective to its students through exchange programs, study abroad, and academic offerings.

The Minor in International Studies

The minor in international studies is designed to increase students' awareness of and sensitivity

to the values, traditions, and aspirations of people in other parts of the world and to provide comprehensive knowledge of a specific geographical location. This program, coordinated by the Department of Urban Studies and Planning, enables students to earn a minor in international studies while completing departmental, school, and university requirements for a B.A. or B.S. degree. The insights offered by the wide variety of disciplines which focus on an international perspective are intended to enhance the minor. For additional information contact the Department of Urban Studies and Planning, 810/812 West Franklin Street, Box 2008, Richmond, VA 23284-0001, (804) 257-1134.

Exchange Program

As a member of ISEP, the International Student Exchange Program, VCU helps students study abroad at member sites throughout the world: Africa, Asia, Australia, Canada, Europe, or Latin America. The program offers direct enrollment and academic credit toward the student's degree program at home as well as immersion in another country's language and culture. The cost is no more than the student would pay at VCU for tuition, room, and board.

For further details contact the International Studies Office: 786-0342.

Study Abroad

Each year scores of VCU students have the opportunity to extend their educational horizons by studying in Europe, Russia, China, and other parts of the world through VCU-sponsored travel-study programs. Although these international courses may be taken by students who do not wish to receive academic credit, their purpose is expressly educational. International travel study courses are designed for students as a part of their total educational experience, not merely as recreation.

Additional information may be obtained from the International Studies Office, 301 West Franklin Street, Box 2041, Richmond, VA 23284-0001, (804) 786-0342.

PROFESSIONAL CONTINUING EDUCATION

JOHN OEHLER

Director

PATRICIA WORLEY

Assistant Director, Conferences

Community Education—Noncredit Professional Continuing Education

Noncredit professional education programs afford opportunities for practitioners in a variety of disciplines to participate in continuing education activities. Each school of the university has a director of continuing education who is responsible for the design, implementation, and evaluation of noncredit continuing education activities within the specialties of the school. In many of these programs, participants are awarded Continuing Education Units (C.E.U.s). Each year more than 900 programs are held.

The Division of Continuing Studies and Public Service provides the communication link among the various programs and facilitates the coordination of work on tasks and problems shared by all program areas. With accountability for the total university effort in noncredit continuing education, the division is a clearinghouse for channeling important information about continuing education to the school directors. It is also a point of contact for comprehensive information about continuing education when such information is needed by the wider community outside the university.

Conferences

Through a contractual agreement, the university maintains the Center for Continuing Education in the Holiday Inn, Downtown. Located at 301 West Franklin Street, it is midway between the two VCU campuses and is served twice each hour by the intercampus shuttle bus service. Through the division's assistant director for conferences, the center coordinates the use of guest rooms, dining facilities, and meeting space for participants in short programs offered by the various schools and departments of the university.

UNIVERSITY ADVISING CENTER

MARCIA F. ZWICKER

Acting Director

SUSAN LUCAS

Coordinator, Adult Student Advising

The University Advising Center offers assistance with academic and career planning to VCU's special (nondegree-seeking) students. In addition, the staff of the center, which has a special commitment to adult and nontraditional

students, offers information and referral to all continuing studies students.

Students studying (or planning to study) at VCU may receive information from the center on university opportunities and services as well as interpretation of university rules and procedures. Workshops and classes are also offered which assist students in clarifying educational goals and in refreshing academic skills. The center serves as an entry point for continuing studies students and as a liaison between these students and the university's academic schools.

Additional information can be obtained by calling (804) 257-0200 or by writing University Advising Center, Virginia Commonwealth University, 901 West Franklin Street, Box 2523, Richmond, VA 23284-0001. Office hours are Monday–Thursday 8 am–7:30 pm, Fridays 8 am–4:30 pm and Saturday 9 am–1 pm.

MEDIA INSTRUCTION

RICHARD A. ALEKNA
Director

The Office of Media Instruction works with the academic schools of the university to coordinate the delivery of educational programs (credit and non-credit) via various telecommunications systems. These include VCU courses and workshops/seminars delivered via open broadcast television, public cable TV, audio teleconferencing, closed-circuit television, and pre-recorded media.

In addition to seeing that VCU's unique resources are made accessible to citizens in the Richmond area and beyond, the Office of Media Instruction coordinates the reception/delivery of unusual educational resources from providers external to VCU. These activities include the coordination of national satellite-delivered programming for VCU Staff and clientele and international programs such as the recent language/cultural teleconference with the University for Foreigners in Perugia, Italy.

Announcements of telecourse schedules and other activities are placed in the *VCU Division of Continuing Studies and Public Service Bulletin* and in the *Media Instruction Newsletter*. For more information contact the Office of Media Instruction, Virginia Commonwealth University, 901 West Franklin Street, Box 2041, Richmond, VA 23284-0001, (804) 786-0344.

COOPERATIVE EDUCATION

GERALDINE GARNER
Director
CHERYL TILLEY
Assistant Director
ELEANOR GREEN
Coordinator

Cooperative Education (Co-op) is an optional program open to students who meet minimum program qualifications and are pursuing undergraduate degrees in certain academic disciplines within the College of Humanities and Sciences, the School of the Arts, the School of Business, the School of Community and Public Affairs, the School of Education, and the School of Social Work. Eligible students make application to Co-op positions for which they may qualify. Once accepted for Co-op employment, students register for non-credit Co-op courses that will maintain enrollment at the university and provide a record of the experience on the official transcript.

Students must maintain satisfactory performance with their Co-op employer and the minimum grade-point average set by the university or the employer, whichever is higher. Students must work a minimum of three Co-op work periods (semesters) between their sophomore and senior years.

In order to be eligible for the program a student must (1) be enrolled in a participating discipline; (2) have completed the freshman year or one full semester if the student is a transfer student; (3) have a 2.5 overall grade-point average as a sophomore or a 2.0 overall grade-point average as a junior or senior; (4) have recommendations from two VCU faculty from whom the student has had course work. Once accepted for Co-op employment, a student must enroll in the appropriate non-credit Co-op course. Special administrative fees for students registered for non-credit Co-op experiences are shown in the Schedule of Classes catalogue.

For additional information contact the Director of Cooperative Education, Virginia Commonwealth University, 901 West Franklin Street, Box 2508, Richmond, VA 23284-0001.

COOPERATIVE EDUCATION (COP)

298 Cooperative Education Experience. Semester course; no credit. Open to full-time students who have been placed in an approved Co-op position with an agency, business, industry, or institution. The Co-op work experience will provide broad exposure to a career field related to one's academic

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major. The student works a maximum of 20 hours per week, completes all off-campus/on-campus assignments. Prior to placement, a student must have eligibility verified, two letters of recommendation from VCU faculty, and successful completion of the Co-op orientation sessions.

398 Cooperative Education Experience. Semester course; no credit. Open to full-time students who have been placed in

an approved Co-op position with an agency, business, industry, or institution. The student works a maximum of 40 hours per week, completes all off-campus/on-campus assignments. Prior to placement, a student must have eligibility verified, two letters of recommendation from VCU faculty, and successful completion of the Co-op orientation sessions.

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Men's Basketball Coach

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Associate Director of UES/Registration

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Cheryl Gonzales Yeaman
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Jean M. Yerian, A.B., Higher Diploma, M.A.
Director of Career Planning and Placement

INSTRUCTIONAL STAFF

The date after each name indicates year of appointment.

Abdelsamad, Moustafa H. (1968) *Professor of Finance and Associate Dean for Graduate Studies, School of Business* B. Com., Cairo University; M.B.A., D.B.A., George Washington University.

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- Alimard, Amin (1982) *Assistant Professor of Public Administration* B.A., M.A., American University of Beirut; D.P.A., University of Southern California.
- Allan, Richard E. (1972) *Associate Professor of Mathematical Sciences* B.S., Samford University; M.A., University of Alabama; Ph.D., George Peabody College.
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- Ames, James E. (1980) *Assistant Professor of Mathematical Sciences* B.S., Hampden-Sydney College; M.S., Ph.D., Duke University.
- Andersen, Anne (1980) *Associate Professor of Dance and Choreography and Chairman, Department of Dance and Choreography* B.A., Carleton College; M.F.A., University of Wisconsin at Madison.
- Anderson, Barbara J. (1982) *Instructor and Catalog Librarian* B.A., Luther College; M.A. Library Science and Music, University of Iowa.
- Andrews, Joseph C. (1979) *Assistant Professor and Acting Head, Circulation Department, JBCL* B.A., M.L.S., North Carolina Central University; M.A., St. John's College.
- Andrews, Robert L. (1978) *Associate Professor of Management Science* B.S., M.A., University of Alabama; M.S., Ph.D., Virginia Polytechnic Institute and State University.
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- Apgar, Nicholas A. (1962) *Professor of Communication Arts and Design* B.F.A., M.F.A., Syracuse University.
- Armbruster, Horst (1985) *Assistant Professor of Physics* M.S., Ph.D., Universitaet zu Koeln.
- Armour, Robert A. (1963) *Professor of English* B.A., Randolph-Macon College; M.A., Vanderbilt University; Ph.D., University of Georgia.
- Arnold, Edmund C. (1975) *Professor Emeritus of Mass Communications* A.B., Michigan State University; L.H.D., Hartwick College.
- Asai, Nancy (1984) *Instructor of Education and Director, Residence Education* B.A., Elmira College; M.S., State University of New York College, Buffalo.
- Auerbach, Stephen M. (1973) *Professor of Psychology* B.A., Queens College (CUNY); M.S., Ph.D., Florida State University.
- Bachman, Katherine H. (1985) *Head, Special Collections/Archives* B.A., Pomona College; M.S.L.S., Catholic University of America.
- Baedke, Ronald L. (1977) *Instructor of Music* M.M., Manhattan School of Music.
- Bagby, James M. (1983) *Visiting Assistant Professor of Mathematical Sciences* B.A., University of Richmond; M.Ed., University of Virginia; Ph.D., Ohio State University.
- Bailey, James W. (1964) *Professor Emeritus of Education* A.B., Cornell College; B.D., Garrett Theological Seminary; M.Ed., University of Chicago.
- Bailey, Kent G. (1968) *Professor of Psychology* B.A., Emory and Henry College; M.S., Virginia Commonwealth University; Ph.D., University of West Virginia.
- Baker, Paul K. (1983) *Instructor of Education and Senior Program Coordinator for Student Activities* B.A., St. Lawrence University; M.S., State University of New York College at Buffalo.
- Baker, Stanley E. (1971) *Associate Professor of Education* B.A., Virginia Union University; M.A., M.Ed., Ed.D., Columbia University.
- Ball, Wesley (1982) *Assistant Professor of Music* B.M.E., Shenandoah College and Conservatory of Music; M.A., Case Western Reserve University; M.M., Cleveland Institute of Music; Ph.D., Case Western Reserve University.
- Barber, Alice L. (1964) *Associate Professor of Social Work* B.S., Southwestern Louisiana College; M.S.W., Tulane University.
- Barrett, C. Allen (1982) *Assistant Professor of Administration of Justice and Public Safety* B.A., St. Paul's College; M.A., John Jay College of Criminal Justice; M.A., New York University.
- Bartolich, Eugene (1985) *Instructor of Business Administration and Management* B.S., Air Force Institute of Technology; M.S., University of Pittsburgh; M.B.A., Chapman College.
- Bass, Robert G. (1962) *Professor of Chemistry* B.S., Virginia Polytechnic Institute and State University; Ph.D., University of Virginia.
- Bates, Jerry W. (1982) *Instructor of Communication Arts and Design* B.F.A., Virginia Commonwealth University.
- Batts, Valerie A. (1984) *Staff Psychologist, University Counseling Services* B.A., University of North Carolina at Chapel Hill; M.A., Long Mountain College, San Francisco; Ph.D., Duke University.
- Batty, L. Wayne (1949) *Professor of Music* B.M.Ed., Illinois Wesleyan University; B.M., Kansas City Conservatory; M.M., Chicago Musical College.
- Bauer, David F. (1974) *Associate Professor of Mathematical Sciences* B.S., East Stroudsburg State College; M.S., Ohio University; Ph.D., The University of Connecticut.
- Bay, Peter (1984) *Instructor of Music* B.S., University of Maryland; M.M., Peabody Conservatory of Music.
- Beale, Andrew V. (1969) *Professor of Education* A.B., M.S., University of North Carolina; Ed.D., University of Virginia.
- Beall, Larry G. (1970) *Associate Professor of Economics* B.A., State University of New York at Binghamton; M.A., University of South Carolina; Ph.D., Duke University.
- Beck, William J. (1969) *Professor of French* B.S., M.A., Ph.D., Rutgers-The State University; Middlebury Language School; Institut Catholique, Paris, France.

- Beckett, Joyce O. (1985) *Professor of Social Work* B.A., Temple University; M.S.S., Ph.D., Bryn Mawr College.
- Bedell, Jeanne (1983) *Instructor of English* A.B., Sweet Briar College; M.A., University of Richmond; Ph.D., Southern Illinois University.
- Bedell, Paul (1982) *Instructor in Music* B.M., University of Nebraska; M.M., University of Wisconsin.
- Bejar, Manuel (1980) *Associate Professor of Spanish* Licenciado en Filosofía y Letras, University of Madrid; Ph.D., University of Utah.
- Belloni, Frank P. (1973) *Associate Professor of Political Science* B.A., University of California at Riverside; M.A., University of Iowa; Ph.D., University of California at Los Angeles.
- Benda, Brent B. (1982) *Assistant Professor of Social Work* B.S., Southwest Missouri State University; M.S.S.W., Ph.D., University of Wisconsin.
- Bendersky, Joseph W. (1976) *Associate Professor of History* B.A., City College of New York; M.A., Ph.D., Michigan State University.
- Bentley, Suzanne, (1984) *Instructor of Social Work* B.A., Florida Presbyterian College; M.S.W., University of North Carolina, Chapel Hill; Ph.D., Virginia Polytechnic Institute and State University.
- Berglund, John Findley (1972) *Professor of Mathematical Sciences* B.A., Ohio Wesleyan University; Ph.D., Tulane University.
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- Berry, Boyd M. (1974) *Associate Professor of English* B.A., Harvard College; M.A., Ph.D., University of Michigan.
- Berry, Sam G. (1971) *Associate Professor of Finance* B.S., M.B.A., D.B.A., Florida State University.
- Beverly, David P. (1973) *Associate Professor of Social Work* B.A., University of Richmond; M.S.W., Virginia Commonwealth University; D.S.W., Catholic University of America.
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- Biddle, Thelma S. (1966) *Assistant Professor of History* B.S., Trenton, New Jersey State Teachers College; M.Ed., College of William and Mary; Ed.D., University of Virginia.
- Bigelow, Alden G. (1957) *Associate Professor Emeritus of History and Geography* B.S., M.A., Ph.D., University of Virginia.
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- Bilyeu, Francile (1974) *Instructor of Music* B.M., Kansas State University; M.M., University of Tulsa.
- Bilyeu, Landon (1974) *Associate Professor of Music* B.M., Centenary College; M.M., University of Tulsa.
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- Blake, John A. (1949) *Associate Professor Emeritus of Psychology* A.B., Presbyterian College; M.A., Johns Hopkins University.
- Blake, William E., Jr. (1965) *Professor of History* B.A., University of Cincinnati; M.A., B.D., Cincinnati Bible Seminary; Th.M., Th.D., Union Theological Seminary.
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- Borden, George L. (1976) *Instructor of Physical Education and Director of Sports Medicine* B.S., Virginia Commonwealth University.
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- Boyce, John K. (1985) *Instructor of Philosophy and Religious Studies* B.A., Saint Olaf College; Ph.D. candidate, Brown University.
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- Briceland, Alan V. (1966) *Associate Professor of History* A.B., College of William and Mary; M.A., Ph.D., Duke University.
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- Briggs, Frances M. (1966) *Professor Emeritus of Education* A.B., Duke University; M.A., George Peabody College; Ph.D., University of North Carolina.
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- Brinks, Lindsay (1978) *Assistant Professor of Communication Arts and Design* B.A., Birmingham Polytechnic, England; M.A. Western Michigan University.
- Brittain, Mary (1978) *Assistant Professor of Education* A.B., Agnes Scott College; M.A., Emory University; Ph.D., University of Miami.
- Brock, Susan B. (1985) *Instructor of Education and Assistant Director, Career Planning and Placement* B.A., M.Ed., University of Virginia.
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- Bromley, David G. (1983) *Professor of Sociology and Chairman, Department of Sociology and Anthropology* A.B., Colby College; M.A., Ph.D., Duke University.
- Brown, Barry E. (1984) *Visiting Assistant Professor in Philosophy and Religious Studies* B.A., Kalamazoo College; M.A., Columbia University; M.A., Ph.D., University of Rochester.
- Brown, Charlotte (1982) *Assistant Professor of Philosophy and Religious Studies* B.A., Manhattanville College; M.A., Yale University; Ph.D., Yale University.
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- Brown, Patricia J. (1978) *Assistant Professor of Recreation, Parks and Tourism* B.S., Michigan State University; M.S., Indiana University.
- Brown, Russell V. (1974) *Professor of Biology* B.A., M.A., University of Tulsa; Ph.D., Iowa State University.
- Brown, William P. (1984) *Assistant Professor of Accounting* B.A., North Carolina State University; M.B.A., Old Dominion University; Ph.D., University of North Carolina, Chapel Hill; CPA.
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- Bryan, John (1981) *Assistant Professor of Art and Director, Faculty Research and Development, School of the Arts* B.S., Davidson College; M.A., George Peabody College; M.F.A., City College of New York.
- Bryant, Cynthia (1985) *Assistant Professor of Education* B.S., M.Ed., South Carolina State College; Ed.D., University of Alabama.
- Bryant, Lynn S. (1978) *Instructor and Coordinator of Advising* B.A., M.Ed., Virginia Commonwealth University.
- Bumgardner, James A. (1958) *Professor of Painting* B.F.A., Virginia Commonwealth University; Hans Hofmann School of Art.
- Burnside, Chris (1985) *Assistant Professor of Dance and Choreography* B.F.A., Virginia Commonwealth University; M.M., Florida State Uni-

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- Busby, Doris W. (1978) *Associate Professor of Education* B.S., Tennessee A and I State University; Ed.M., Ed.D., University of Illinois.
- Bush, Joseph P. (1983) *Assistant Professor of Psychology* B.A., University of California at Santa Cruz; M.A., Ph.D., University of Virginia.
- Bush, Larry C. (1985) *Lecturer in English* B.A., M.A., Florida State University.
- Bushway, Collin (1969) *Professor Emeritus of Management* M.B.A., University of Chicago; D.B.A., George Washington University.
- Byrd, Donna G. (1979) *Instructor of Business Administration and Management* B.A., College of William and Mary; M.B.A., Virginia Commonwealth University.
- Byrne, Timothy L. (1974) *Assistant Professor and Assistant Reference Librarian* B.A., University of Virginia; M.S.L.S., University of Kentucky.
- Cafarella, Edward (1985) *Associate Professor of Education* B.S., Springfield College; M.Ed., University of Massachusetts; Ph.D., Michigan State University.
- Caffarella, Rosemary S. (1982) *Associate Professor of Education* B.A., Springfield College; M.A., Ed.S., Ph.D., Michigan State University.
- Cahill, Kevin (1985) *Assistant Professor of Communication Arts and Design* B.A., California State University, Chico; M.F.A., Cranbrook Academy of Art.
- Campbell, B. Jewett (1948) *Professor Emeritus of Painting and Printmaking* New York Art Students' League (3 years); Skowhegan School of Painting and Sculpture (two summers); Hans Hoffman School of Art (two summers).
- Campbell, Kenneth (1970) *Professor of Theatre* M.A., Catholic University; M.A., University of Glasgow; Ph.D., University of Denver.
- Campbell, Thomas C. (1980) *Professor of Economics* A.B., Lynchburg College; M.A., Ph.D., University of Pittsburgh.
- Canavos, George C. (1975) *Professor of Management Science and Assistant Dean, School of Graduate Studies* B.S., M.S., Ph.D., Virginia Polytechnic Institute and State University.
- Capas, Diana J. (1984) *Instructor of Education and Program Coordinator, Student Activities* B.S., Cleveland State University; M.S., Indiana University.
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- Carlyon, Richard N. (1960) *Professor of Communication Arts and Design* B.F.A., M.F.A., Virginia Commonwealth University.
- Carpenter, Floyd W. (1982) *Assistant Professor of Accounting* B.S., M.B.A., Murray State University; Ph.D., University of Mississippi; C.P.A.
- Carrier, Loran (1973) *Associate Professor of Music* A.A., Assumption Abbey; B.A., Queen of Apostles; B.M., M.M., Catholic University; M.M., Washington Music Institute; D.M.A., University of Maryland.
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- Carter-Lovejoy, Steven H. (1983) *Instructor and Reference Librarian* B.A., Williams College; M.S., Idaho State University; M.L.S., Florida State University.
- Carver, Terrell (1985) *Visiting Exchange Professor of Political Science* B.A., Columbia University; B.Phil., D.Phil., Balliol College, Oxford.
- Cauley, Kathleen (1985) *Assistant Professor of Education* B.A., Pennsylvania State University; Ph.D., University of Delaware.
- Chan, Chun-Wai (1982) *Director of University Student Health Services* B.A., Princeton College; M.D., M.P.H., Harvard University.
- Chandler, Anne L. (1984) *Assistant Professor of Rehabilitation Counseling* B.A., Vanderbilt University; M.A., Ph.D., Michigan State University.
- Chandler, James D. (1981) *Visiting Assistant Professor of Mathematical Sciences* B.S., Davidson College; M.A., Ph.D., University of Virginia.
- Chatterji, Anil (1982) *Assistant Professor and Director of Academic Computing, MCV Campus* B.S., M.S., Delhi University, India; M.S., Virginia Polytechnic Institute and State University.
- Cheng, Chao-Kun (1984) *Associate Professor of Mathematical Sciences* B.A., National Taiwan University; Ph.D., University of Notre Dame; Ph.D., Clarkson College of Technology.
- Cherry, Milton (1950) *Professor Emeritus of Music* B.M., American Conservatory; M.M., Chicago Musical College.
- Chestang, Leon W. (1984) *Commonwealth Visiting Professor, School of Social Work* A.B., Blackburn College; M.S.W., Washington University; Ph.D., University of Chicago.
- Chinnici, Joseph P. (1970) *Associate Professor of Biology* A.B., LaSalle College; Ph.D., University of Virginia.
- Clark, Jean A. (1983) *Instructor of Mathematical Sciences* B.A., Gettysburg College; M.A.T., Emory University.
- Clark, Prudence F. (1979) *Associate Professor and Collection Management Librarian* B.A., Oberlin College; M.L.S., University of California at Berkeley.
- Clark, Sharon F. (1982) *Visiting Assistant Professor*

- of *Business Administration and Management* B.A., J.D., University of Richmond.
- Clements, James P. (1981) *Instructor of Information Systems* B.S., Virginia Polytechnic Institute and State University; M.S., Virginia Commonwealth University.
- Clevenger, Novella N. (1985) *Assistant Professor of Accounting* B.S., M.A., M.B.A., Southeast Missouri State University; J.D., Memphis State University; CPA.
- Clevenger, Thomas B. (1985) *Assistant Professor of Accounting* B.S., University of Missouri at Columbia; M.B.A., Southeast Missouri State University; CPA.
- Coakley, Frank (1985) *Visiting Associate Professor in Mass Communications* B.A., Rutgers University.
- Coffman, Edward N. (1966) *Professor of Accounting* B.S., M.S., Virginia Commonwealth University; D.B.A., George Washington University.
- Coleman, Earle J. (1971) *Associate Professor of Philosophy and Religious Studies* A.B., Illinois College; M.A., Ph.D., University of Hawaii.
- Conway, Carolyn M. (1976) *Assistant Professor of Biology* B.S., Longwood College; M.A., College of William and Mary; Ph.D., University of Miami.
- Coppedge, Walter R. (1968) *Professor of English* B.A., University of Mississippi; B.Litt., Oxford University; M.A., Memphis State University; M.A., Ph.D., Indiana University.
- Coppins, Richard James (1978) *Associate Professor of Management Science* B.S., M.S., Lehigh University; Ph.D., North Carolina State University.
- Corazzini, John G. (1980) *Associate Professor of Psychology, Clinical Associate Professor (Psychology), Department of Psychiatry, and Director of University Counseling Services* A.B., St. John's Seminary College; M.A., Ph.D., University of Notre Dame.
- Cordle, David P. (1986) *Assistant Professor of Music and Assistant Chairman, Department of Music* B.M., Shorter College; M.M., D.M.A., Florida State University.
- Corson, Catherine (1981) *Instructor of Biology* B.S., College of William and Mary; M.S., Virginia Commonwealth University.
- Corson, Craig (1985) *Instructor of Biology (PT)* B.S., College of William and Mary.
- Cowan, Margie L. (1982) *Assistant Professor of Psychology and Staff Counselor for University Counseling Services* B.A., Louisiana Tech University; Ph.D., Oklahoma State University.
- Cox, Jennings G. (1985) *Assistant Professor of Psychology and Staff Psychologist* B.A., Randolph-Macon College; M.S., Virginia Commonwealth University; Ph.D., University of Missouri.
- Cox, Revis A. (1978) *Instructor of Education and Assistant Director of Student Activities* B.A., University of Connecticut; M.A., University of Rhode Island.
- Craver, Samuel M. (1970) *Associate Professor of Education* B.A., M.A.T., Ph.D., University of North Carolina.
- Creasman, Kay M. (1980) *Assistant Professor of Business Administration and Management* B.S., Athens College; M.Ed., Tulane University; J.D., University of Richmond.
- Creighton-Zollar, Ann (1981) *Assistant Professor of Sociology and Afro-American Studies* B.A., M.A., Ph.D., University of Illinois at Chicago Circle.
- Cromey, Robert D. (1973) *Associate Professor of History* B.A., M.A., Ph.D., University of Wisconsin.
- Crowe, Virginia M. (1982) *Associate Professor and Associate Director, Public Services* ULS B.S., Edinboro State College; M.L.S., Ph.D., University of Pittsburgh.
- Crutchfield, George Thomas (1970) *Professor of Mass Communications and Director, School of Mass Communications* B.S., Florida Southern College; M.S., Florida State University.
- Cutler, Kay A. (1985) *Instructor and Reference Librarian* B.S., Ed., Ohio State University; M.L.S., Catholic University of America.
- Dahlke, H. Otto (1966) *Professor Emeritus of Social Work* B.A., M.A., University of Illinois; Ph.D., University of Wisconsin.
- Dalberto, Janet A. (1979) *Instructor and Assistant Collection Management Librarian* B.A., Pennsylvania State University; M.L.S., University of Pittsburgh.
- Dalton, Amy Hickerson (1976) *Associate Professor of Economics* B.A., Westhampton College; M.A., University of Pennsylvania; Ph.D., University of Virginia.
- Dance, Daryl C. (1972) *Professor of English* A.B., M.A., Virginia State College; Ph.D., University of Virginia.
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- Daniel, Robert N. (1977) *Instructor of Music* B.M.E., Texas Tech University; M.M., Catholic University.
- Danish, Steven J. (1985) *Professor of Psychology and Chairman, Department of Psychology* A.B., Bucknell University; M.S., Springfield College; Ph.D., Michigan State University.
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- Davis, Evelina M. (1985) *Instructor of Education and Evening Coordinator, Career Planning and Placement* B.A., North Carolina Agricultural and Technical State University.
- Davis, King E. (1984) *Professor of Social Work* B.S.W., M.S.W., California State University; Ph.D., Brandeis University.
- Davis, Meredith (1976) *Professor of Communication*

- Arts and Design* B.S., M.Ed., Pennsylvania State University; M.F.A., Cranbrook Academy of Art.
- Davis, Michael (1979) *Associate Professor of Education* B.S., Buffalo State College; M.Ed., University of Buffalo; Ph.D., University of Illinois.
- Davis, Nancy Karen (1984) *Associate Professor of Interior Design* B.F.A., M.F.A., University of Georgia.
- Davis, Robert G. (1973) *Associate Professor of Physical Education* B.S., Westchester State College; M.Ed., Pennsylvania State University; Ph.D., University of Maryland.
- Dawson, Gaye C. (1979) *Assistant Professor of Information Systems* B.S., Radford University; M.Ed., Ph.D., University of Maryland.
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- Day, Marilyn R. (1981) *Instructor, Counselor and Coordinator, Educational Support Programs* B.S., M.Ed., Virginia Commonwealth University.
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- DeGenaro, Guy J. (1970) *Professor of Management* B.S., University of Maryland; M.B.A., Indiana University; Ph.D., University of Florida.
- Deihl, Susan G. (1981) *Assistant Professor and Operations Manager, University Media Production Center, ULS* B.F.A., Eastern Kentucky University; M.F.A., Virginia Commonwealth University.
- Delahunty, Teresa M. (1980) *Instructor of Education and Associate Director for University Student Commons* B.S., Adelphi University; M.Ed., Trenton State College.
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- Dennis, Rutledge M. (1971) *Associate Professor of Sociology* B.A., South Carolina State College; M.A., Ph.D., Washington State University.
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- DeSmidt, Thomas H. (1971) *Professor of Painting and Printmaking and Associate Dean, School of the Arts* A.A., Lincoln College; B.F.A., Layton School of Art; M.F.A., Syracuse University.
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- Diana, Lewis (1968) *Professor of Sociology* A.B., Harvard University; M.A., Ph.D., University of Pittsburgh.
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- Dodd, Joyce W. (1984) *Assistant Professor of Mass Communications* B.A., Virginia Commonwealth University; M.A., University of Richmond.
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- Duke, E. F. (1966) *Associate Professor of English* B.A., Longwood College; M.A., University of Virginia; Ph.D., University of Iowa.
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- Griffin, Claudius W. (1960, 1969) *Associate Professor of English* B.S., M.A., University of Richmond; Ph.D., Indiana University.
- Griggs, Walter S., Jr. (1971) *Associate Professor and Chairman, Department of Business Administration and Management* M.H., J.D., University of Richmond; Ed.D., College of William and Mary.
- Groman, William D. (1965) *Professor Emeritus of Psychology* B.A., M.S., University of Miami (Florida); Ph.D., Duke University.
- Grosenick, Leigh E. (1975) *Professor of Public Administration and Director of DPA Program* B.A., M.S., Ph.D., University of Minnesota.
- Gross, Ena (1979) *Assistant Professor of Education* B.S., Taylor University; M.Ed., Ph.D., Georgia State University.
- Groves, Barney R. (1970) *Associate Professor of Education and Director, Intramural Sports* B.S., Southeastern State College; M.S., Oklahoma University; Ph.D., Florida State University.
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- Gumaer, James (1975) *Associate Professor of Education* B.S., State University of New York, Cortland; M.S., Syracuse University; Ed.S., Ed.D., University of Florida.
- Gunter, Ben D. (1965) *Professor of Interior Design* A.B., Bridgewater College; B.F.A., Virginia Commonwealth University; M.Ed., University of Virginia.
- Guthrie, Karen (1984) *Assistant Professor of Fashion* B.S., Virginia Commonwealth University.
- Gweon, Seong C. (1983) *Assistant Professor of Finance* B.A., M.B.A., Seoul National University; Ph.D. University of Illinois.
- Ha, Cu Duong (1980) *Assistant Professor of Mathematical Sciences* B.S., M.S., University of Saigon, Viet-Nam; M.S., University of Missouri at Rolla; Ph.D., University of Wisconsin at Madison.
- Haas, Frederick C. (1969) *Professor of Management* B.B.A., M.B.A., M.A., Hofstra University; Ph.D., University of Florida.
- Haas, Thomas W. (1983) *Professor and Director, Cooperative Graduate Engineering Program* B.S. University of Buffalo; M.S., Pennsylvania State University; Ph.D., Princeton University.
- Haberstroh, Jack (1983) *Associate Professor of Mass Communications* B.A., Loyola University; M.S., University of California at Los Angeles; Ph.D., University of Iowa.
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- Halbach, David F. (1986) *Associate Professor of Administration of Justice and Public Safety* B.B.A., University of Iowa, J.D., University of Iowa, M.A., University of Chicago.
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- Hall, J. Curtis (1962) *Professor and Dean, School of Business* A.B., Duke University; M.S., Virginia Polytechnic Institute and State University; Ed.D., Columbia University.
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Spanish
- Farmer, Johanna M. B., B.A., M.A., Ph.D.
Philosophy
- Feyock, Merry A. M., B.A., M.A.
German
- Fisher, Joseph L., B.S., M.A., Ph.D.
Public Administration
- Flanagan, Elizabeth A., B.A., M.S.W., Ph.D.
Gerontology
- Fox, James D., A.A., B.S., M.S.
Administration of Justice and Public Safety
- Fox, James E., B.S., M.A., Ph.D.
Art History
- Fox, Stephen P., B.A., M.S.W.
Social Work
- Franco, Patricia C., B.S., M.S.
Rehabilitation Counseling
- Gailes, George A., III
Music
- Gaines, William R., B.F.A., M.F.A.
Art History
- Galambos, Sherrie, B.F.A.
Photography
- Gallagher, Daniel T., M.A.
Urban Studies and Planning
- Gay, Lenore H., B.S., M.S.
Rehabilitation Counseling
- Gero, Thomas W., B.A., M.S.
Chemistry
- Gerow, Clare W., B.S., Ph.D.
Mathematical Sciences
- Gibson, Joyce S., B.S., M.S.
English
- Gilmore-Bryan, Janet C., B.S., M.A., M.F.A.
Art Foundation
- Godwin-Jones, Elizabeth, B.A., M.A., J.D.
German
- Goldblum, Robert, B.A., M.A.
English
- Gottipamula, Ashok K., B.S., M.S., Ph.D.
Physics
- Gould, Bruce, B.S., M.U.R.P.
Urban Studies and Planning
- Grainger, J. Cameron, B.S.
Theatre
- Gregory, Jean W., B.S., M.S., Ph.D.
Urban Studies and Planning
- Gregson, Jack D., B.S.
Mass Communications
- Griffith, Douglass P., A.B., M.Ed.
Business/Mathematics
- Grinnan, Daniel, Jr., B.S., M.C.
Administration of Justice and Public Safety
- Guengerich, Audrey J., B.A.
English
- Guillem, Alvaro F., B.S., Ph.D.
Chemistry
- Gunlicks, Regine J., M.A.
German
- Gutowski, Frank, B.A., M.A., Ph.D.
Physics
- Hall, G. Gregory, Jr., B.A., M.A., Ph.D.
English
- Hall, Martha M., B.A., M.A., Ph.D.
English
- Hallahan, Robert F. III, B.M.E.
Music
- Halloran, Dennis H., B.S., M.A.
Art History
- Hamme, Janet S., M.B.A.
Business
- Hammett, Joanna N., B.S., M.Ed.
Education
- Hanna, John T., B.S.
Administration of Justice and Public Safety

- Hart, Nancy A., B.F.A., M.F.A.
Painting and Printmaking
- Hassell, Thomas T., Jr., B.A., J.D.
Business
- Hatch, Nesbit N., B.F.A.
Dance
- Hawkes, Robert H., B.A., M.F.A.
Painting and Printmaking
- Hawner, Pierre H., B.S., B.B.A., M.A.
French
- Hayden, Vickie L., A.S., B.S., M.S.
Business
- Haynes, Charles C., III, B.A., M.T.S.
Religious Studies
- Hazlett, Robert L., B.S., M.A., Ed.D.
Business
- Hays, David M., B.A., M.A.
History
- Hefty, William H., B.A., J.D.
Political Science
- Herbek, Raymond H., B.A., M.M., Ph.D.
Music
- Herbertson, Robert K., Jr., B.A., M.A.
Statistics
- Higgins, Ralph B., B.L.A.
Urban Studies and Planning
- Hirsch, Gail McEachron, B.A., M.A., Ph.D.
Education
- Hobbs, Odell, B.M., M.M., D.A.
Music
- Hobson, Maria, B.F.A.
Art
- Hoehing, Douglas L., B.A., B.S.
Physical Education
- Hogge, David A., B.A., M.A., Ph.D.
Business
- Hogshead, Deborah L., B.A., M.A.
Psychology
- Holt, Annett C.
Dance
- Hughes, Winfree A., B.A., M.A.
Religious Studies
- Huq, Md. Shamsul, M.S., M.A., Ph.D.
Economics
- Hurdle, Burton, B.A., Ph.D.
Philosophy
- Inge, Katherine J., B.S., M.Ed.
Education
- Jackson, Lloyd E., Jr., B.S., M.A., Ed.D.
Education
- Jasper, Wolfgang, A.A., B.A., M.F.A.
Art Foundation
- Jencik, Mary W., M.S.
Rehabilitation Counseling
- Jenkins, John W., B.S., M.S.
Business
- Jernigan, Jack D., B.A., M.A., Ph.D.
Sociology
- Johann, Suzanna, B.S., M.S.
English
- Johnson, Sabrina C., B.S., M.P.A.
Dance
- Jones, Janet W., B.F.A., M.Ed.
Art Education
- Jones, Kathleen K., B.A.
Recreation
- Jones, Michael C., B.S., M.F.A.
Art History
- Kaestner, Joseph W., B.A., J.D.
Administration of Justice and Public Safety
- Kahsar, Daniel F., B.S., M.S.
Physical Education
- Kang, John, B.A., B.S.
Chinese
- Katyal, Yateesh, B.S., M.B.A.
Business
- Kaufmann, Stephen J., B.A., M.B.A., J.D.
Business
- Kavanaugh, Edward P., B.A.
Rehabilitation Counseling
- Kessler, Karen D., B.A., M.A.
Dance
- Keve, Paul W., B.A., M.S.W.
Administration of Justice and Public Safety
- Kilmartin, Christopher E., A.A., B.S., M.S.
Psychology
- King, Irving R., B.S.
Physics
- Kinzey, James R., B.A., M.A.
English
- Kohan, J. David, B.F.A., M.F.A.
Painting and Printmaking
- Korman, Harriet A., B.A.
Painting and Printmaking
- Kulp, James E., B.S., LL.B.
Administration of Justice and Public Safety
- Lackman, Conway Lee, B.S., M.S., Ph.D.
Economics
- Ladue, Carol P., B.S., M.S.
Administration of Justice and Public Safety
- Lamb-Bowring, Sally, A.A.S., B.A., M.F.A.
Art Education
- Lampert, Evelyn, M.S.W.
Social Work
- Laposata, Samuel M., B.S., M.A., Ph.D.
Economics
- Larkin, John J., B.S., M.B.A.
Business
- Laslie, Sandra W. S., B.S., M.S.
Health Care Management
- Lemire, Robert C., Jr., B.A., M.S.
History
- Leonard, Russell L., Jr., B.A., M.A., Ph.D.
Business
- Lerner, Marjorie A. Barr, B.A., M.S.W.
Social Work
- Levine, Gary, B.S.
Business
- Levy, Lawrence H., A.B., M.B.A.
Business

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- Lind, Robin R., B.A.
Mass Communications
- Lisz, Gary K.
Fashion Design
- Loehr, Linda C., B.S., M.A.
English
- Loving, Ann M., B.S., M.Ed.
Education
- Lucas, William C., B.M., M.M.
Music
- Lucas, Wingate H., B.A.
Recreation
- Lura, Richard D., B.S., Ph.D.
Chemistry
- Magette, Kurt, A.B., J.D.
Business
- Mallis, Steven J., B.S., M.S.
Mathematical Sciences
- Mandelkorn, Sharon L., B.F.A., M.F.A.
Physical Education
- Mangan, Jay H., B.S.
Mass Communications
- Mansfield, Richard M., III, B.S., M.S., Ed.D.
Business
- Mardavich, Frank E., B.S., J.D.
Administration of Justice and Public Safety
- Martin, Mary A., B.S., M.S.
Business
- Massey, John D., B.A.
Dance
- Massie, Martha, B.A.
Health Education
- Masullo, Antonio, LL.D.
Italian
- Matthews, Harry G., B.A., M.A., Ph.D.
Political Science
- Mauro, John B., B.S.
Business
- Maynard, Jay A., B.A., M.S.
Rehabilitation Counseling
- McAllister, William E., B.G.S., M.Ed.
Rehabilitation Counseling
- McCloud, David K., B.A., M.A.
Public Administration
- McCoy, Howard E., Sr., B.S., M.Ed.
Business
- McCreedy, Kenneth R., B.S., M.P.H., D.P.A.
Public Administration
- McCreery, Patrick W., B.A., M.U.R.P.
Urban Studies and Planning
- McDowell, William J., B.S., M.S.
Rehabilitation Counseling
- McGill-Jackson, Deborah, A.B., M.Arts, M.Div.
Religious Studies
- McGovern, James J., B.S., M.S., Ph.D.
Health Administration
- McIntyre, Joseph, B.M.
Music
- McLeod, Judith L., B.A., M.S., M.F.A.
Art Foundation
- Mengle, David L., B.A., M.A., Ph.D.
Economics
- Mier, Karen K., B.A., M.S.
Recreation
- Miller, Elizabeth R., B.S., M.S.
Rehabilitation Counseling
- Millner, Nancy B., A.B., M.Ed.
Education
- Mistr, Vicki, B.S., M.S.
Education
- Momsen, Beverly M., B.A., M.Ed., Ed.D.
Rehabilitation Counseling
- Montgomery, John J., B.S., M.S.
Rehabilitation Counseling
- Moody, Diane S., B.M.E., M.H.
Music
- Moore, Opal J., B.F.A., M.A., M.F.A.
Art
- Mooz, R. Peter, B.A., M.A., Ph.D.
Art History
- Morey, Susan E., B.A., M.A.T.
Mathematical Sciences
- Morookian, Robert J., B.S., M.B.A.
Business
- Morris, Michelle, B.F.A., M.F.A.
Art Education
- Morris, Thomas R., A.B., M.S.
Mass Communications
- Morrison, Richard D., B.A., M.A., Ph.D.
Sociology
- Moyer, Mary, B.S.W., M.S.W.
Rehabilitation Counseling
- Moyer, Ronald C., Ph.D.
Psychology
- Mueller, Gerd F., M.A., M.B.A., Ph.D.
Business
- Mullin, M. Teresa, B.S., M.S.
Rehabilitation Counseling
- Muse, William W., B.A., J.D.
Business
- Mustafa, Nancy C., A.A., A.B., M.A.
Spanish
- Myers, Thomas A., B.A., M.S.
Business
- Nance, Nancy, B.A., M.Ed., Ph.D.
Education
- Navon, Alicia G., B.S., M.S.
Rehabilitation Counseling
- Near, Pinkney L., B.A., M.A.
Art History
- Nelson, Bennett S., B.S., M.S.
Rehabilitation Counseling
- Newcomb, C. Lynn, B.A., M.Ed.
Physical Education
- Newman, Joanna M., B.S., M.S., Ph.D.
Rehabilitation Counseling
- Nickels, Judith Q., B.S., M.Ed.
Education
- Norman, R. Daniel, B.A., M.Ed., Ed.D.
Education

- Norwood, Cynthia H., B.A., J.D.
Business
- Nuckols, Emily R., B.A., M.A.
Mathematical Sciences
- O'Hare, Patrick M., B.S., M.S.
Physical Education
- O'Neal, Margaret F., B.A., M.Ed., M.A.
Psychology
- Oulton, Richard J., A.A.S., B.A., J.D., M.B.A.
Health Care Management
- Overton, Carolan S., B.A.
Dance
- Overvold, Angelina G., B.A., M.A.
French
- Pandiello, Estela A., B.A., M.A., Ph.D.
Spanish
- Pappas, Alexander, B.F.A., M.F.A.
Painting and Printmaking
- Parks, Lavada W., B.M., M.M.
Music
- Pazera, Joan S., A.A., B.G.S.
Rehabilitation Counseling
- Peoples, Napoleon L., B.A., M.Ed., Ed.S., Ph.D.
Psychology
- Phillips, Mary D., B.A.
Speech
- Pike, Richard T., B.A., M.B.A.
Theatre
- Plessinger-Coltrane, Ronda, B.M.E., M.M.
Music
- Pollio, Ann, B.A., M.A.
Education
- Poore, Kenneth W., B.A., M.U.R.P.
Urban Studies and Planning
- Potter, David L., B.A., M.A., Ph.D.
Anthropology
- Powell, Marcia H., B.S.
French
- Pozefsky, Abby L., B.A., J.D.
Business
- Preston, Gail S., B.A., J.D.
Political Science
- Pruett, Robert H., B.A., M.A.
English
- Pugh, Brenner T., B.A., M.A.
English
- Pyles, Michael A., B.A., M.A., Ph.D.
Health Care Management
- Ramsey, Robert M., B.S.
Physical Education
- Ranneft, Danielle M., B.A., M.A., Ph.D.
Foreign Languages
- Reilly, Daniel E., B.S., M.B.A.
Business
- Reynolds, Emily V., B.A.
Art Education
- Richardson, Norma M., A.A., B.A., M.A.
English
- Ridley, Morris L., B.S., M.S.
Psychology
- Robertson, Barbara L., B.A., M.A.
French
- Rochkind, George, B.S., M.B.A.
Business
- Rodgers, Michael
Administration of Justice and Public Safety
- Rohman, Thomas, B.B.A., J.D., LL.M.
Business
- Romaniuk, John G., B.A., M.A., Ph.D.
Business
- Rosen, Lawrence P., B.S.
Mass Communications
- Rountrey, J. Parks, B.S.
Economics
- Rozzelle, M. Jan, B.S., M.A.
Education
- Ryland, Madeline A., A.A., B.A., M.A., Ph.D.
Spanish
- Salinda, Christina M., B.S.
Business
- Saucer, Moira Jean, B.A., M.A., M.F.A.
English
- Sauer, David F., B.F.A., M.A.
Photography
- Scala, Mark W., B.F.A., M.F.A.
Art Foundation
- Schlottzauer, Jude, B.F.A., M.F.A.
Art Foundation
- Schooley, Wayne L., B.S.
Business
- Schwartz, Helen, B.S.
Business
- Scott, Constance A., B.A., M.A.
Business
- Scott, John W., B.A., M.A., Ph.D.
English
- Seiberlich, Gene P., B.S.
Business
- Seiden, Lester, B.S., Ph.D.
Chemistry
- Sekhri, Pradeep, B.S.E.E., M.S.
Business
- Shafer, Michael, B.S., M.A.
Education
- Shanklin, James R., B.A., Ph.D.
Chemistry
- Shapiro, David M., B.A., J.D.
Political Science
- Sheridan, Janet D., B.S., M.A.
French
- Shin, Kuen S., B.S., M.S., Ph.D.
Biology
- Silver, Melissa A., B.A., M.Ed.
Business
- Sims, Lynn L., B.A., M.A., Ph.D.
History
- Slayden, Eugene R., Jr.
Physical Education
- Smith, Bonita Pennino, M.S.
Rehabilitation Counseling

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- Smith, Genevieve B., B.A., M.A., M.S., Ph.D.
Foreign Languages
- Smith, R. Kemper, Jr., B.S., M.S.
Business
- Sonn, Julian, B.A., M.A.
Psychology
- Spielman, Betheny, B.S., M.H.A., Ph.D.
Religious Studies
- Spiro, Jack D., B.A., M.A., D.H.L., Ed.D.
Religious Studies/Humanities
- Stalter, Clifford R., M.A.
Business
- Starke, Wallace M., B.S., J.D., LL.M.
Business
- Steele, Richard, A.A., B.S., M.S.
Business
- Steely, John N., B.S., M.S.
Mathematical Sciences
- Steilberg, Isabel F., B.A., M.A.
English
- Stem, Albert F., Jr., B.A., M.A., Ed.D.
Business
- Stewart, Frances, B.S., M.S., Ph.D.
Psychology
- Stipe, Jean M., B.A., M.A.
English
- Stratton, Sharon Lloyd, B.A., M.Ed.
Education
- Stredney, Dennis M., B.F.A.
Art Foundation
- Stumpf, Mary E., B.A., M.A.
Art History
- Swaby, Richard, B.A., M.S.
Business
- Tauer, Kathleen Mary, B.S., M.S.
Nursing
- Taylor, E. Scott, B.M.E.
Music
- Taylor, Nancy Jo, A.B., M.H.
History
- Thompson, Gloria Pollard, B.S., M.Ed.
Education
- Thompson, Harry A., B.S., M.S.
Recreation
- Thompson, Wayne C., B.A., M.S., Ph.D.
Psychology
- Tiffany, Linda, B.S., M.S., Ed.D.
Education
- Todd, Alice R., B.A., M.A., Ph.D.
French
- Tolley, Cedric L., Jr., B.A., M.A.
English
- Tolley, Evangeline S., B.S., M.S.
Social Work
- Topich, Ruth M., B.A.
Chemistry
- Townsend, William H., B.S., M.S.
Business
- Treadway, Sandra G., B.A., M.A., Ph.D.
History
- Tribbey, Ann B., B.A., J.D.
Political Science
- Tubbs, James B., Jr., B.S., Ph.D.
Philosophy
- Tucker, Neda B., B.S., M.Ed.
Business
- Turner, R. Ed, B.A., M.A.
English
- VanVleet, Paul E., B.A., Ph.L., St.B.
Spanish
- Vantrease, Elizabeth L., B.A.
American Studies
- Varner, Thomas A., B.S., M.S.
Administration of Justice and Public Safety
- Wachter, Eddie R., B.A., M.S.
Computer Sciences
- Wagner, Eileen N., B.S., M.Ed., Ed.D.
English
- Wainwright, G. Richard, B.S.
Mass Communications
- Wainwright, John I., B.A., M.S.
Rehabilitation Counseling
- Wajciechowski, John, B.G.S.
Physical Education
- Walker, J. William, B.S.
Mass Communications
- Walz, David H., B.S., M.A.
Mathematical Sciences
- Ward, Julian T., B.A., M.S.W.
Social Work
- Ware, Selena L., B.A., M.S.
Mathematical Sciences
- Wasson, James W., A.B.
History
- Webb, Larry W., B.S.
Computer Science
- Weinstein, Carlton, B.A., M.S.
Rehabilitation Counseling
- Welles, Richard H., Jr., B.A.
Rehabilitation Counseling
- Welsch, Kathleen A., B.A., M.A.
English
- White, David R., B.S., M.F.A.
Photography
- White, Garnett Lee, B.A., M.A., Ph.D.
History
- Whitehead, Camden, B.A., M.Arch.
Interior Design
- Whitehurst, Elizabeth K., B.A., M.A.
English
- Whitmore, L. Timothy, B.S., M.S.
Rehabilitation Counseling
- Wilbourne, Mary T., B.S., M.S.
Business
- Wilkinson, James B., LL.B.
Administration of Justice and Public Safety
- Williams, Allan T., A.A., B.A., M.A.
Recreation
- Williams, Andrew W., B.S., M.S.
Computer Science

Williams, David D., B.C.E., M.F.A.

Mathematical Sciences

Williams, Gudrun B., B.A., M.A.

French

Williamson, Carolyn, B.A., M.A.

Mathematical Sciences

Wilson, Steven, B.A.

Physical Education

Winters, Bernadette C., B.S., M.A.S.S.

Social Work

Winthrop, Robert P., B.A.

Art History

Wojcik, Robert, B.S., M.S.

Physical Education

Woo, Wei K., B.S., M.B.A.

Business

Woodfin, William L., B.S., M.S.

Biology

Wooding, Robert E., B.F.A., M.F.A.

Art Foundation

Worrall, Harold W., B.S., M.A.

Public Administration

Wray, Elizabeth E., B.A., M.A.

History

Yano, William G., B.B.A., M.B.A., CPA

Business

Yates, Daniel S., A.B., M.S., Ph.D.

Mathematical Sciences

Zedd, Leslie B., B.A., M.H.

English

Privacy Rights of Parents and Students

Provisions for the release of information concerning students, including the rights of access by students and others to education records maintained by Virginia Commonwealth, are as follows:

A. Release of Personally Identifiable Student Information

It is the policy of Virginia Commonwealth University that "personally identifiable information," other than "directory information" from a student's education records, will not be disclosed, without the written consent of the affected student, to any party or organization which does not have a legitimate right of access to the information. The persons or organizations which are deemed to have legitimate rights of access are

1. Virginia Commonwealth University officials and staff, and university academic excellence and honor societies, fraternities, and sororities which have a designated faculty advisor. Requests from such officials or organizations shall be directed to the appropriate office and proper identification will be required. Access will not be granted unless it is determined that the person or organization is deemed to have a legitimate educational interest, which is defined as having some reasonable relationship to instruction, supervision, administration, or other similar responsibility of this university.
2. Appropriate persons in connection with a student's application for or receipt of financial aid.
3. Appropriate federal or state education authorities.
4. Organizations conducting studies for, or on behalf of, Virginia Commonwealth University, for the purpose of assisting the university in the accomplishment of its stated mission and purpose; provided, however, that such information will be used only by such organizations and will be destroyed when no longer needed for the intended purpose. University Enrollment Services must approve requests of this nature.

5. Accrediting organizations.

6. Parents of a dependent student, as defined in Section 152 of the Internal Revenue Code. (Note: Husbands and wives are not entitled to obtain records of their spouses without the consent of the spouse, regardless of dependency.)

7. In compliance with judicial order or subpoena, after the university has made a reasonable effort to notify the student.

8. Appropriate persons in connection with an emergency if such knowledge is necessary to protect the health or safety of a student or other persons.

NOTE: Custodians of student records will maintain a record of all individuals and agencies which have requested or obtained access to a student's record (except those listed in A(1) and (6) above). This record will specifically indicate the legitimate interest that the person or agency had in obtaining the information, and the information made available will be limited to that necessary to satisfy such demonstrated needs. In addition, custodians will, prior to the release of "personally identifiable information" from a student's record, obtain assurances that the information will be used only for the purpose for which the original disclosure is made and that there will be no further disclosure without the student's consent.

B. Definitions:

1. **Education Records.** "Education records" are defined as those records, files, documents, and other materials which (1) contain information directly related to a student; and (2) are maintained by Virginia Commonwealth University or by a person acting for the university. They do *not* include (1) personal notes and other such information which is in the sole possession of the maker and which is not accessible or revealed to any other individual; (2) records available only to law enforcement personnel; (3) employment records; (4) medical, psychological, and psychiatric, rec-

ords which are disclosed only to individuals providing treatment and which can be made accessible to the student's personal physician or other appropriate person of the student's choice; or (5) information collected on a person who is no longer a student at Virginia Commonwealth University and which pertains to activities or accomplishments that occurred after the person ceased to be a student at VCU (e.g., records of the accomplishments of alumni). A list of education records maintained by the university and the location thereof is available in University Enrollment Services.

2. *Student.* A "student" is any person who is or has been enrolled at Virginia Commonwealth University, and with respect to whom education records are maintained by the university, and includes a parent of a "dependent student," as defined in Section 152 of the Internal Revenue Code.
3. *Directory Information.* "Directory information" includes the following: a student's name, mailing address and telephone number, local address and telephone number, semesters of attendance, load status (full- or part-time), date of admission, date of graduation, school, major and minor fields of study, whether or not currently enrolled, classification (freshman, sophomore, etc.), type of degree being pursued, honors, awards, degree received, weight and height of members of athletic teams, and whether the student has participated in officially recognized activities and sports sponsored by the university. At the time of registration, and not later than 14 days after the beginning of a term, the student may submit to the Office of Enrollment Services/Academic Records a written request that directory information pertaining to that student not be released. This request is effective only for the one semester and must be renewed at the beginning of each academic term.
4. *Access.* Access to an education record signifies the right to inspect one's records and includes the right to obtain copies of that record.

C. *Procedure for Gaining Access to Education Records*
To obtain access to one's records, a student must advise the custodian of the records of his or her desire to examine such records. If desired, the student may also request an explanation and/or copies of such records. A reasonable fee will be charged for copies provided. Examination will be permitted under conditions which will prevent alteration or mutilation of the

record. A student must present proper identification upon the request of the custodian of the records.

If the student believes the record content to be inaccurate, he or she may submit a request to amend the record. Normally, such matters will be satisfactorily resolved in the course of informal discussions with the student. When agreement cannot be reached, a written challenge as to the accuracy of the record may be presented to the record custodian, who will provide a response to the student within a period of 45 days. If the student's request is not granted, the student will also be advised of his or her right to a hearing. The student may then submit a written request for a hearing to the dean of student life, who will refer the matter to the University Hearing Board. The normal procedures established for the Hearing Board will govern such appeals. If the appeal is denied, the student may submit to the University Hearing Board a written explanation to be inserted into the record.

NOTE: This procedure does not provide for a hearing to contest an academic grade.

D. *Limitations on Rights of Access*

A student is not entitled access to:

1. Financial records of parents or any information therein.
2. Confidential letters and statements of recommendation which were placed in the education records prior to January 1, 1975, as well as those received subsequent to that date when the student has specifically waived, in writing, his or her right to examine or review said letter(s) or statement(s).
3. Medical and/or psychiatric records, when the attending physician has made a part of the record a written statement that in his or her opinion, the review of the records would not be in the best interest of said person.

E. The university retains all rights to the student's academic record and may withhold transcripts of the record because of unfulfilled obligations to the university.

F. These guidelines are promulgated pursuant to Section 438, Pub. L. 90-247, Title IV, as amended, 88 stat. 571-574 (20 U.S.C. §1232g); and the regulations promulgated by the Secretary of Health, Education, and Welfare as published in the *Federal Register* on Thursday, June 17, 1976. A student who feels that the university has failed to comply with applicable regulations is entitled to file a complaint with the Secretary of Health and Human Services.

Determination of Student Classification

Section 23-7.4, of the *Code of Virginia*, governs eligibility for in-state tuition. Effective July 1, 1984, the statute provides:

§ 23-7.4. Eligibility for in-state tuition charges. — A. For purposes of this section the following definitions shall apply:

"Date of the alleged entitlement" means the first official day of class within the term, semester or quarter of the student's program.

"Dependent student" means one who is listed as a dependent on the federal or state income tax return of his parents or legal guardian or who receives substantial financial support from his parents or legal guardian.

"Domicile" means the present, fixed home of an individual to which he returns following temporary absences and at which he intends to stay indefinitely. No individual may have more than one domicile at a time. Domicile, once established, shall not be affected by mere transient or temporary physical presence in another jurisdiction.

"Domiciliary intent" means present intent to remain indefinitely.

"Emancipated minor" means a student under age of eighteen on the date of the alleged entitlement whose parents or guardians have surrendered the right to his care, custody and earnings and who no longer claim him as a dependent for tax purposes.

"Full-time employment" means employment resulting in, at least, an annual earned income reported for tax purposes equivalent to fifty work weeks of forty hours at minimum wage.

"Independent student" means one whose parents have surrendered the right to his care, custody and earnings, have ceased to support him, and have not claimed him as a dependent on federal and state income tax returns for at least twelve months prior to the date of the alleged entitlement.

"Special arrangement contract" means a contract between a Virginia employer or the authorities controlling a federal installation or agency located in Virginia and a public institution of higher education for reduced rate tuition charges as described in paragraph G of this section.

"Substantial financial support" means financial support

in an amount which equals or exceeds that required to qualify the individual to be listed as a dependent on federal and state income tax returns.

"Unemancipated minor" means a student under the age of eighteen on the date of the alleged entitlement who is under the legal control of and is financially supported by either of his parents, legal guardian or other person having legal custody.

"Virginia employer" means any employing unit organized under the laws of Virginia or having income from Virginia sources regardless of its organizational structure, or any public or nonprofit organization authorized to operate in Virginia.

B. In order to become eligible for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In order to become eligible for in-state tuition, a dependent student or unemancipated minor shall establish by clear and convincing evidence that for a period of at least one year prior to the date of the alleged entitlement, the person through whom he claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if such existed.

In determining domiciliary intent, all of the following applicable factors shall be considered: continuous residence for at least one year prior to the date of alleged entitlement, state to which income taxes are filed or paid, driver's license, motor vehicle registration, voter registration, employment, property ownership, sources of financial support, location of checking or passbook savings accounts and any other social or economic relationships with the Commonwealth and other jurisdictions. Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the Commonwealth. Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status.

Those factors presented in support of entitlement to in-state tuition shall have existed for the one-year period prior to the date of the alleged entitlement.

C. The domicile of a married person shall be determined in the same manner as the domicile of an unmarried person.

The domicile of an emancipated minor shall be established in the same manner as any other independent student.

Any alien holding an immigration visa or classified as a political refugee shall also establish eligibility for in-state tuition in the same manner as any other student. However, absent congressional intent to the contrary, any person holding a student or other temporary visa shall not have the capacity to intend to remain in Virginia indefinitely and, therefore, shall be eligible for Virginia domicile and for in-state tuition charges.

The domicile of a dependent student shall be rebuttably presumed to be the domicile of the parent or legal guardian claiming him as an exemption on federal or state income tax returns currently and for the tax year prior to the date of the alleged entitlement or providing him substantial financial support.

A matriculating student who has entered an institution classified as out-of-state shall be required to rebut by clear and convincing evidence the presumption that he is in the Commonwealth for the purpose of attending school and not as a bona fide domicile.

For the purposes of this section, the domicile of an unemancipated minor or a dependent student eighteen years of age or older may be either the domicile of the parent with whom he resides or the parent who claims the student as a dependent for federal and Virginia income tax purposes for the tax year prior to the date of the alleged entitlement and is currently so claiming the student. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor unless there are circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on the unemancipated minor.

D. It is incumbent on the student to apply for changes in domiciliary status on becoming eligible for such change. Changes in domiciliary status shall only be granted prospectively from the date such application is received.

A student who knowingly provides erroneous information in an attempt to evade payment of out-of-state fees shall be charged out-of-state tuition fees for each term, semester or quarter attended and may be subject to dismissal from the institution. All disputes related to the veracity of information provided to establish Virginia domicile shall be appealable through the process procedure required by paragraph H below.

E. A nonmilitary student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student. However, a nonmilitary student, not otherwise eligible for in-state tuition, whose parent or spouse is a member of the military stationed or residing in the Commonwealth pursuant to military orders and claiming a state other than Virginia on their State of Legal Residence Certificate, shall be entitled to in-state tuition charges when the following conditions are met: (i) if the student is a child of a member of the armed forces, then the nonmilitary parent shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition charges, resided in Virginia, been employed full time and paid individual income taxes to Virginia. Such student shall be eligible for in-state tuition charges only if the

nonmilitary parent claims him as a dependent for Virginia and Federal income tax purposes; or (ii) if the student is the spouse of a member of the armed forces, then such student shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition, resided in Virginia, been employed full time and paid individual income taxes in Virginia. Any student whose spouse or parent is a member of the armed forces shall be eligible for in-state tuition charges for so long as these conditions continue to be met.

F. Students who live outside this Commonwealth and have been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement for in-state tuition shall be eligible for in-state tuition charges if such student has paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Students claimed as dependents for federal and Virginia income tax purposes who live outside this Commonwealth shall become eligible for in-state tuition charges if the nonresident parent claiming him as a dependent has been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement and paid Virginia income taxes on all taxable income earned in the Commonwealth for the tax year prior to the date of the alleged entitlement. Such students shall continue to be eligible for in-state tuition charges for so long as they or their qualifying parent are employed full time in Virginia, paying Virginia income taxes on all taxable income earned in this Commonwealth and the student is claimed as a dependent for Virginia and federal income tax purposes.

G. Public institutions of higher education may enter into special arrangement contracts with Virginia employers or authorities controlling federal installations or agencies located in Virginia. The special arrangement contracts shall be for the purpose of providing reduced rate tuition charges for the employees of the Virginia employers or federal personnel when the employers or federal authorities are assuming the liability for paying to the extent permitted by federal law, the tuition for the employees or personnel in question and the employees or personnel are classified by the requirements of this section as out-of-state.

Special arrangement contracts with Virginia employers or federal installations or agencies may be for group instruction in facilities provided by the employer or federal authority or in the institution's facilities or on a student by student basis for specific employment-related programs.

Special arrangement contracts shall be valid for a period not to exceed two years and shall be reviewed for legal sufficiency by the office of the Attorney General prior to signing. All rates agreed to by the public institutions shall be at least equal to in-state tuition and shall only be granted by the institution with which the employer or federal authorities have a valid contract for students for whom the employer or federal authorities are paying the tuition charges.

All such contracts shall be registered with the State Council of Higher Education to assure accurate tabulation of the domiciles of the students.

All special arrangement contracts with authorities controlling federal installations or agencies shall include a specific number of students to be served at reduced rates. In any fiscal year, the total number of such students at all state-supported institutions of higher education shall not exceed one-half of one percent of the projected annual full-time equivalent student enrollment in the state-supported institutions of higher education.

Nothing in this subsection shall change the domiciliary

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status of any student for the purposes of enrollment reporting or calculating the proportions of general funds and tuition and fees contributed to the cost of education.

H. Each public institution of higher education shall establish an appeals process for those students who are aggrieved by decisions on eligibility for in-state tuition charges. The Administrative Process Act (§§ 9-6.14:1 et seq.) shall not apply to these administrative reviews.

An initial determination shall be made. Each appeals process shall include an intermediate review of the initial determination and a final administrative review. The final administrative decision shall be in writing. A copy of this decision shall be sent to the student. Either the intermediate review or the final administrative review shall be conducted by an appeals committee consisting of an odd number of members. No person who serves at one level of this appeals process shall be eligible to serve at any other level of this review. All such due process procedures shall be in writing and shall include time limitations in order to provide for orderly and timely resolutions of all disputes.

Any party aggrieved by a final administrative decision shall have the right to review in the circuit court for the jurisdiction in which the relevant institution is located. A petition for review of the final administrative decision shall be filed within thirty days of receiving the written decision.

In any such action, the institution shall forward the record to the court, whose function shall be only to determine whether the decision reached by the institution could reasonably be said, on the basis of the record, to be supported by substantial evidence and not to be arbitrary, capricious or otherwise contrary to law.

I. In order to ensure the application of uniform criteria in administering this section and determining eligibility for in-state tuition charges, the State Council of Higher Education shall issue and from time to time revise guidelines, including domiciliary status questions to be incorporated by all state institutions of higher education in their admissions applications. These guidelines shall not be subject to the Administrative Process Act (§§ 9-6.14:1 et seq.) of this Code.

An advisory committee, composed of ten representatives of the public institutions, shall be appointed by the Council each year to cooperate with the Council in developing the guidelines for determining eligibility or revisions thereof. The Council shall consult with the Office of the Attorney General and provide opportunity for public comment prior to issuing any such guidelines.

The first set of such guidelines shall be issued September 1, 1984.

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2 Williams House, 800 W. Franklin Street	30 620 N. Lombardy St.	112 Rhoads Hall, 710 W. Franklin St.
3 Franklin Street Gymnasium, 817 W. Franklin St.	31 1004 W. Cary St.	116 Bird House, 820 W. Franklin St.
4 Founders Hall, 827 W. Franklin St.	34 Bowe House, 917 W. Franklin St.	117 Physical Plant Warehouse, 6 S. Linden St.
5 President's House, 910 W. Franklin St.	36 Thurston House, 808 W. Franklin St.	118 25 S. Linden St.
6 Ginter House, 901 W. Franklin St.	38 Meredith House, 1014 W. Franklin St.	120 Harrison House, 816 W. Franklin St.
8 Anderson House, 913 W. Franklin St.	41 Johnson Hall, 801 W. Franklin St.	121 327 W. Main St., Financial Operations
9 Kearney House, 921 W. Franklin St.	44 Millhiser House, 916 W. Franklin St.	122 Victory Van Building, 601 W. Main St.
10 Scherer Hall, 923 W. Franklin St.	45 916 W. Franklin St. (rear)	123 Blanton House, 826-28 W. Franklin St.
12 Anderson Gallery, 907½ W. Franklin St.	46 Sitterding House, 901 Floyd Ave.	124 VCU Meeting Center, 101 N. Harrison St.
13 Life Sciences Building, 816 Park Ave.	52 310 N. Shafer St.	135 Physical Plant Shops, 10 S. Linden St.
14 Ritter-Hickok House, 821 W. Franklin St.	55 White House, 806 W. Franklin St.	138 James Branch Cabell Library, 901 Park Ave.
15 609 W. Main St.	58 Stokes House, 918 W. Franklin St.	139 Pollak Building, 325 N. Harrison St.
17 McAdams House, 914 W. Franklin St.	60 Stagg House, 912 W. Franklin St.	149 School of Business, 1015 Floyd Ave.
18 1314 W. Main St.	64 1128 Floyd Ave.	Business School Auditorium, 14 N. Linden St.
19 Adkins House, 824 Park Ave.	65 107 N. Morris St.	150 10 N. Brunswick St.
1 Hibbs Building, 900 Park Ave.	66 Holiday Inn, 301 W. Franklin St.	160 909 W. Franklin St.
2 Shafer Street Playhouse, 221 N. Shafer St.	67 Raleigh Building, 1001 W. Franklin St.	163 Oliver Hall-Physical Sciences Wing, 1001 W. Main St.
3 Lafayette Hall, 312 N. Shafer St.	68 Cary Street Recreational Facilities, 911 W. Cary St.	164 Gladding Residence Center, 711 W. Main St.
4 VCU Music Center, 1014 Grove Ave.	81 Buford House, 922 W. Franklin St.	166 Performing Arts Center, 922 Park Ave.
5 Stark House, 915 W. Franklin St.	96 Franklin Terrace, 812-14 W. Franklin St.	167 Oliver Hall - Education Wing, 1015 W. Main St.
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7 Younger House, 919 W. Franklin St.	103 Valentine House, 920 W. Franklin St.	202 Mosque
8 Student Commons, 907 Floyd Ave.	111 VCU Public Parking	203 Ask-it, Shafer St.



Academic
Campus
Locator



Code Building

- | | | |
|--|---|---|
| 1 Bear Hall, 10th & Leigh Sts. | 20 Randolph Minor Annex, 301 College Street | 49 West Hospital, 1200 E. Broad Street |
| 2 Personnel Annex Building, 411 N. 11th St. | 21 Rudd Hall, 10th & Leigh Streets | 50 East Hospital, 1215 E. Marshall Street |
| 3 Nursing Education Building, 1220 E. Broad St. | 22 Sheltering Arms, 1008 E. Clay Street | 52 Nelson Clinic, 401-09 N. 11th Street |
| 4 Robert Blackwell Smith, Jr. Building
410 N. 12th St. | 23 Strauss Research Laboratory, 527 N. 12th Street | 53 North Hospital, 1300 E. Marshall Street |
| 5 Dooley Building, 1225 E. Marshall St. | 24 Monumental Church, 1224 E. Broad Street | 54 Virginia Treatment Center, 515 N. 10th Street |
| 6 Egyptian Building, 1223 E. Marshall St. | 25 Tompkins-McCaw Library, 509 N. 12th Street | 55 MCV Hospitals Heliport |
| 7 Pathological Incinerator, 316 College St. | 26 Toxicology Laboratory & Rodent House
9 N. 13th Street | 56 Faculty/Staff Parking Deck (Lot D)
515 N. 13th Street |
| 8 Facilities Management Shops Building
659 N. 8th Street | 27 Warner Hall, 10th & Leigh Streets | 59 MCV Hospital Clinical Support Center
403 N. 13th Street |
| 9 Leigh House, 1000 E. Clay Street | 28 Wood Memorial Building, 521 N. 11th Street | 60 George Ben Johnston Auditorium, 305 N. 12th St. |
| 11 McGuire Hall, 1112 E. Clay Street | 29 Massey Cancer Center, 401 College Street | 61 Richmond Plaza Building, 110 S. 7th St. |
| 12 McRae Hall, 10th & Leigh Streets | 30 Larrick Student Center, 641 N. 8th Street | 62 Mechanics Institute, 1000 E. Marshall Street |
| 13 Sanger Hall, 1101 E. Marshall Street | 31 Cabanis Hall, 600 N. 8th Street | 63 Zeigler House, 1006-08 E. Marshall Street |
| 14 Ambulatory Care Center, 408 N. 12th Street | 32 Lyons Dental Building, 520 N. 12th Street | 64 Samuel Putney House, 1010 E. Marshall Street |
| 15 MCV/VCU Visitor/Patient Parking Deck
1220 E. Clay Street | 33 Gymnasium, 9th & Leigh Streets | 65 Stephen Putney House 1012 E. Marshall Street |
| 16 University Personnel Employment Office
1101 E. Clay Street | 34 Animal Research Facility, Hanover County | 66 Holiday Inn, 301 W. Franklin Street |
| 17 Central Heating & Power Plant, 400 N. 13th St. | 38 Consolidated Lab Building, 9 N. 14th Street | 68 Main MCV Hospital, 401 N. 12th Street |
| 18 MCV Alumni Building, 1105 E. Clay Street | 44 Newton House, College & Broad Streets | 70 Faculty/Staff Parking Deck (Lot E) |
| 19 Randolph Minor Hall, 307-15 College Street | 45 First Baptist Church, 323 N. 12th Street | 121 Planning & Finance Building, 327 W. Main St. |
| | 46 A.D. Williams Memorial Clinic
1201 E. Marshall Street | |
| | 47 VCU Day Nursery, 610 N. 9th Street | |



**Medical College
of Virginia
Campus Locator**



NOTES

NOTES

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Virginia Commonwealth University
Box 2527
901 West Franklin Street
Richmond, VA 23284-0001

Special Fourth Class Rate

